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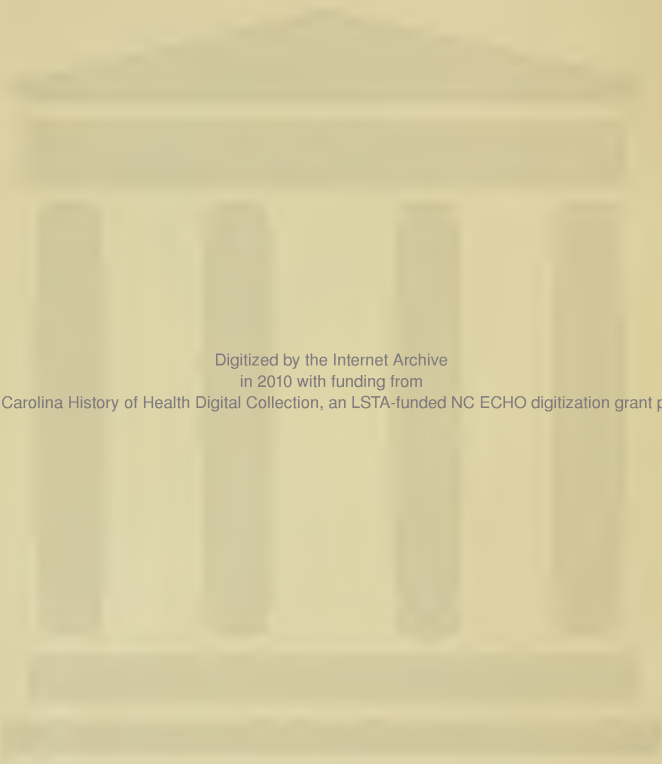

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The Autumnal Fevers of the Southern Atlantic States and their Treatment.

By BEDFORD BROWN, M. D., Alexandria, Va.,* Ex-President of the Southern Surgical and Gynæcological Association; Ex-President of the Medical Society of Virginia; Honorary Fellow of the Medical Society of the District of Columbia; Member of the Am. Med. Association.

Fever of a malarial origin is an annual visitant from August to the middle of October of all that vast section comprised within the Southern Atlantic and Gulf States and also of a large portion of the interior comprising the Middle, Western and Southern States. The large number of cases occurring within the vast area comprised within these borders, the distress of mind and body, the loss of time by sickness, the additional expense incurred, the impairment of health and the greatest of earthly evils, the mortality resulting combined to render this one of the most important and interesting subjects in our profession and how successfully to prevent malarial infection, and to correct it after it enters the human system become questions of paramount importance.

While this subject has for years received the closest attention from scientific and practical minds it never loses interest or grows trite, and in all probability never will.

As stated in a previous page autumnal fever is an annual visitant in the eastern section of the United States, and in certain cases passes under the name of malarial fever, and in certain other cases under that of typhoid fever. I find that this fever makes its appearance in our section about the tenth or fifteenth of August and continues to prevail until killing frost or freezing temperatures begin, and then it as suddenly disappears as it appears. I find also among the profession and among the people that this fever in its simple uncomplicated state goes under the name of malarial fever, while in its complicated state and in its advanced stages it is denominated typhoid fever. Hence in all cases of malarial fever characterized by symptoms of malignancy, as a dry tongue, delirium, jactitation, insomnia, tympanites, frequent pulse and general prostration are always miscalled typhoid, and by some typho-malarial fever. These misnomers and misunderstandings of the proper character of autumnal fever are very misleading in relation to our proper conception of the treatment and management of the disease.

In this fever, which annually visits our section, I do not believe that there is one case in twenty which is genuine typhoid or enteric fever, for these autumnal fevers, however, they may in certain cases simulate true typhoid disappear from our country at the first heavy frost to return again at the next autumn. This is not the course or a part of the history of true typhoid fever. Typhoid fever does not come in hot seasons and go in the cold when frost and ice begin to make their appearance. Typhoid fever does not come when the temperature goes up to 80 or 90°, and disappear when it goes down to 32°. But rather typhoid is a disease prevalent in low temperatures in the late months of winter and early months of spring On the contrary, malaria thrives, flourishes and grows in high temperatures, and moist seasons, in flat, low localities. Typhoid fever has its favorite homes in high cool localities in northern and mountainous sections.

ETIOLOGY OF AUTUMNAL FEVERS.—The question of the origin of malaria, which is the true cause of our autumnal fevers, and of its peculiar nature are now so well settled by scientific investigation it is unnecessary to discuss. The plasmodium malaria of Lavaran, so clearly described by that careful investigator, its parasitic nature, its vegetable origin, its entrance into the circulation, its fastening itself on the red blood corpuscles as any other parasite, its growth and development in

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those corpuscles, its nourishment and sustenance on the material of the corpuscles, and finally its destruction of the red corpuscles as any other parasite would do when fastened on an animal or vegetable body. This destruction of the red corpuscles of the blood explains many, if not all, of the pathological changes resulting from malaria, as organic changes in the liver, spleen, blood, and nervous tissues. It explains the chills, the fever, the congestions, and irregularities of circulation of malarial fevers. The circulation cannot pursue its regular course through the round of the vascular system with disorganized, broken down blood corpuscles- They lodge somewhere in the capillariea and cause local congestions in the lungs, liver, spteen, or brain. This is the true secret of those terrible congestive or pernicious fevers found in malarial regions. The corpuscles of the blood have been either partially or wholly disorganized and are unfit for circulation through the capillaries. The fever that follows the chill is a bold and determined effort of nature to assert itself and relieve a congested circulation. The chill is a partial cessation or suspension of circula tion from partially disorganized blood structure. The fever that follows is necessary to correct that suspension and restore the equilibrium. If there was no fever to follow the chill of malarial fever the circulation in its integrity and equality could never be restored, and in every case there would remain local congestions of the central organs as the brain, liver, lungs, and spleen, that would inevitably produce disorganization of those organs and certain death.

The pernicious form is an example in point. Here there is no reaction, or only a partial reaction, and the result is almost certain death. After the seven days battle around Richmond, in 1862, I saw cases of this fever contracted in the Chickahominy swamps die within fifteen hours after the first chill.

The plasmodium malariæ of Laveran is probably the most certain diagnostic of malaria when found in the blood.

Another very interesting question in this connection is the channel through which the malarial plasmodium is carried and conveyed into the system, whether through the atmospher or water or both. Formerly it was the professional opinion that the air was the channel through which it was conveyed. At present the trend of professional opinion tends to the view that water is the principal channel. Experiments instituted by many observers, in many localities, go to show that water certainly is a common carrier of the malarial parasite.

These experiments show that in malarial regions persons using surface water as that of springs or wells or streams are exceedingly subject to malarial poisoning, while the same persons when made to use water from the deep seservoirs of the earth, as for instance from artesian wells, are entirely free of all malarial affeation. In other words that it is the water from the earth's surface saturated with the debris of vegetable de composition that contains and carries the malarial parasite.

The importance of these facts elicited by scientific investigation cannot be over estimated in a sanitary point of view. But I must think that there is certainly some truth also in the idea that was entertained for so long a time that the air is a carrier of malaria.

I believe that there is some ground for opinion that there are different forms of plasmodium malarial to account for the different types of malarial fever and are not simply due to a difference in quantity of dose.

Forms of Malarial Fever.—The time-honored division of malarial fever into three distinct forms of the disease, intermittant, remittant and pernicious or congestive, still holds good. But there is a sub-division of the remittant form into two distinct types the acute, sudden and violent, and the slow, progressive and insiduous type.

This sub-division of the remittant form into two distinct types I consider of so much importance that I shall when I come to consider that form dwell upon it at some length.

Intermittant Fever or Fever and Ague.—Fever and ague usually runs a distinct course and rarely disposed to run into remittant. At certain seasons it becomes unusually prevalent in the section of the Southern Atlantic States, Then again it may diappear and scarcely be seen for several years.

It is rarely seen in the thickly settled or central portions of towns and cities or

thickly-populated well-watered and well-drained countries. Its favorite localities are the suburbs of towns, low swampy regions supplied with bad drinking water from shallow wells, springs and streams containing vegetable matters. Persons using boiled water, cistern water, artesian water or well-filtered water rarely suffer if at all from fever and ague.

The plasmodium of fever and ague appears to have a positive tendency to infect the liver and spleen. And it is after a time very certain to fasten itself on the red corpuseles of the blood. The habitual subject of ejver and ague ever presents an appearance highly characteristic of the disease. The complexion at once combines jaundiced appearance of hepatic disease and the extreme palor of profound anæmia. Showing the poisonous action of malaria on the structure of the liver and at the same time the disorganizing action of the plasmodium on the blood corpuscles. Thus we have in these cases a combinatin of jaundice and anæmia.

There is a peculiarity about fever and ague that has never been accounted for whrch differs entirely from the remittant and that is a constant tendancy to recur, even long after the subject has ceased to reside in a malarial region. The question is does he get a new dose of the poison or does the malarial germ possesses the power of generation and multiplication within the system similar to other ferments and spores. I myself take the latter view of the case. Otherwise I do not see how this peculiarity can be accounted for.

The Acute Type of Remittant Malarial Fevek.—The acute form of malarial fever begins suddenly, while the patient is in his usual health. It has no premonitory symtoms. The victim may be in a perfect state of health and be stricken down within a few minutes. It is rlmost invariably ushered in by a distinct chill or chillings. The temperature after reaction begins rises rapidly, advancing to 103° no 104° even to 105° within a few hours. Then in the course of ten or twelve hours the remission commences. This is a diurmal rythmic movement of fever. In all of these malarial fevers there will be observed a rythmic element except the pernicious in which it is absent.

In pernicious fevers there is no well-defined or regular rythmic movement in in febrile action whatever. Rythen in fever is a conservative action and an effort of safety and is designed on the part of nature as a protective measure to the pationt. It is an alternation of rise and fall of corporal temperature solely brought about by the conservative forces of nature. Deprived of this rythmiccal tendency in fever we would either have a continued high temperature or low temperature.

In our treatment of fever we attemp tto imitate the rythmic action of nature by medical agencies. Chill in fever is a partial suspension of nerve force by the action of certain poisons on the blood and tissues whether from malrria, sepsis or other causes, in which the circulation is partially, and in fatal cases wholly, suspended, and for the time the blood-making and the heat generating powers are also in partial suspense. Chill, whether slight or grave, means blood poisoning, The fever that follows which we team *reaction* is an effort of nature to restore nervous and circulatory action and throw off the offending cause and is therefore a conservative movement. The chill, the fever and the remission constitute the rythmic movement of malarial fever, and when we see in our cases of malarial fever this rythmic action carried out in perfection we prognosticate a favorable result. But when on the contrary we observe an absence of regular rythmic action in our cases we argue an unfavorahle result provided we cannot restore the rythen of fever by artifical means. Rythmic movement of temperature is peculiarly characteristic of malarial fevers and is generally known under the term periodicity. But it is not confined to these forms of fevers. We see it in typhoid to a certain extent but much less defined. We see it clearly defined in histic and pyæmic fevers. Here it is again evidence of a poison acting on the blood, depressing the nervous system to an extreme degree lowering the temperature and reducing the circulation which we term a *chill*.

Then follows febrile reaction which is a vain effort of nature to reassert itself and throw off the affects of blood poisoning, and failing in this then comes the copious perspiration in the futher vain effort to get rid of the poison, and finally

comes after all this the blessed calm of remission when the rythm of fever for the time has been accomplished with its delightful sensations of relief from the torture and suffering of fever.

Prolonged Malarial Fever.—This is a distinct type from tha acute form of malarial fever. It differs in having a well-marked well-defined premonitory stage which the other has not. This premonitory stage may be developing for a week or more and consists in general sensations of malaise. There is impairment of appetite. Some daily headache. Some painful sensations in the back and limbs. These symptoms are particularly apt to occur towards evening. The victim always feels more or less relief in the morning. Towards night if the pulse and temperature are tested it will be found that they are slightly above normal. The pulse may rise to 85 and the temperature to 99½°. Nevertheless the patient continues to be up and about though he feels there is a loss of physical strength and mental activity and that he is incapable of much exertion. Towards evening the patient has sensaions of chilliness: There is rarely diarrhoea present.

These prodromic symptoms resemble very decidedly those of typhoid fever except that of diarrhoea which is almost invariably present in the latter. But if closely observed it will be found that the prodromic symptoms of prolonged malarial fever increase in severity daily until the full development of the case. There is a daily but very slight increase of temperature and pulse rate, while the patient grows weaker and more indisposed to exertion of any kind. Finally there is entire loss of appetite. Then there is an evening chilliness and fever and towards morning a remission when the patient feels better and stronger during the morning, but as certain as evening approaches there is a return of chillings, feverishness ane decline of strength. It will be observed that at this eary stage the rythm of fever is present and this is characteristic of this fever until it reaches the type of fever that assumes a more continuous form and loses the rythmic character. I regard a proper conception and knowledge of the prolonged form of malarial fever as of exceeding importance as it is often confounded with genuine typhoid fever. A mistake of this kind is exceedingly unfortunate as the treatment of the two diseases is entirely distinct.

At the meeting of the Pan-American Medical Congress held in the City of Washington some years ago a most instructive and interesting paper was read by Dr. Libos, of Caraccas in Venezuela on the subject of "Prolonged Malarial Fever" as observed by him in the Tropies where typhoid is rarely found.

He stated that this type of malarial fever which he regarded as a distinct form prevailed annually in his section of Central America. The development and progress of the disease as so graphically described by him were eminently slow. It is a fever while characterized by frequent changes subject to extreme increase and decline of temperature and often continues for three or four months.

The prolonged malarial remittant fever of our Southern Atlantic States as witnessed by me for many years past has three distinct stages: the premonitory, preceding the development of fever; the simple febrile stage, and finally the true adynamic stage. This is the form of fever we so commonly meet with from July to October in our Southern States, which prevails annually during that period, and suddenly disappears when the temperature falls to 32°.

The curves of temperature in the acute and prolonged forms differ widely. In the acute they are sudden, sharp, abrupt and extreme. In the psolonged form they are slight, gentle, moderate, and never sudden, sharp or abrupt. The rise of temperature is gradual and slow, and never reaches suddenly a high point. In neglected or improperly treated cases there is a gradual increase daily in temperature until the case reaches the true adynamic stage, when it may attain 105° or 106°. But these high degrees are never attained in the early stages of prolonged remittant fever, but only in the advanced or adynamic.

The Premonitory Stage.—The premonitory stage is characterized by a decline in physical strength and mental activity. The victim suffers from langor of mind and body. There is a decline correspondingly in appetite. There are neuralgic pains in the limbs, back and head, due to the action of malarial poison on the great nervous centers, the brain and spinal cord.

The premonitory stage of prolonged malarial fever is always characterized by neuralgic manifestations, and these neuralgic symptoms bear out the rythmic habits of malarial disease. They have their exacerbations and remissions, with much regularity. These neuralgias of the premonitory stage of malarial fever are not unfrequently mistaken for muscular rheumatism, the effects of cold or simple neuralgic pains. In this stage neuralgic symptoms are often of so marked a character as to obscure all other morbid indications. They may appear in the head, neck, back and limbs.

From an early period the poison of malaria makes a marked impression on the sensitive centers of the spinal cord. Its effect on these centres is to produce a state of hyperesthesia or increased sensibility running into neuralgic forms. Whereas the poison of typhoid exerts a contrary effect by producing rather a state of anæsthesia of the nervous centres. Nervous sensibility in typhoid is always impaired, blunted, and below par. Hence the poison of typhoid exerts a marked sedative effect on the brain and spinal cord.

The premonitory stage of prolonged remittent fever usually continues from five to ten days before the development of the stage.

Secondary, or Febrile Stage.— The appearance of chilliness and fever decides the import of the premonitory symptoms. It decides that they are the preliminary symptoms that usher in an attack of fever. Fever of this type is rarely ushered in by a decided or marked chill, but rather by chilliness at evening. Following this chilliness there is a slight rise of temperature, at first usually 100° or 101°. Towards morning this temperature declines to 99° or 99¼°. For a week or ten days there is an evening chilliness, then a slight rise of temperature, continuing during the night, which declines towards morning. This is the true rythm of fever, constituting exacerbrtions and remissions. The curves of temperature at this stage are never abrupt, sharp, or extreme, but gentle, gradual, and slight. The rise will rarely exceed 102°, or the fall decline to 99½°.

The simple febrile stage, if unrestrained about the third week usually begins to assume a decidedly aggravated form. Thus during that febrile exacerbations the temperature rises higher, the pulse becomes more frequent, the tongue dryer, the appetite is lost, the sleep is disturbed and less refreshing; the mental powers are less clear. These symptoms all denote the approach of the adynamic stage. This is the stage of mortality in prolonged malarial fever. I have never known a case to terminate fatally in the simple uncomplicated febrile stage. This is the stage that the questions of the life or death of the patient are to be determined. The case must reach and pass into the adynamic stage before a fatal termination. Hence the infinite importance of averting this stage. So long as we can avert the adynamic stage our patient is safe. Insomnia, restlessness and delirium constitute early indications of adynamia, that should enlist our attention. In adynamia the blood and nervous system are profoundly affected. There are degenerative action at work in both calculated to destroy life. I am persuaded the great system of sympathetic and vaso motor nerves participate in this degenerative action, which explains many of the morbid phenomena of circulatory irregularities of fever.

In the adynamic stage the rythmic movements grow less and less daily, and are less defined. The febrile type gradually loses the remittent form and assumes the continued. Delirium becomes a constant feature. The rest of the patient is seriously impaired, and marked insomnia sets in. The tongue becomes dry, crusty, red or dark brown. In place of tympanites there is often retraction of the abdominal walls, and in very protracted cases the spinal column may be detected through the abdomen. The pulse increases in frequency and the temperature from 104° to 105°. By the end of the fourth week the temperature will range at about 105°, the pulse rate at 125 or 130. Hence the extent and gravity of adynamia in this fever indicate the degree of degenerative action in the blood and tissues. After the adynamic stage sets in their recovery can only take place after such changes or their effects have been repaired by nature. It is this stage of adnamia which all cases of prolonged malarial fever when neglected or ill treated pass through that induces the belief in many that it is true typhoid fever, while others regard it as a combination of typhoid and malarial fever or what is termed by many typho malarial

fever, which is evidently a misnomer, as there is no such disease. It is simply a case of prolonged malarial fever that has passed into the adynamic stage.

The Habitat of Prolonged Malarial Fever.—As we advance from the more temperate climates towards the warm and tropical regions this fosm of disease becomes more prevalent until we reach a point where it is the endemic of the country, and this is in the region of the central American States. Dr. Lobos tells us in his very interesting paper that it is endemic in Venezeula, and as witnessed by him assumes a very protracted form, often continuing three or four months. The idea which I desire to inculcate here is that as we advance towards the tropics the tendency to the prolonged form increases until we reach a point where the protracted form is the prevailing type of malarial disease.

We see this prolonged form of malarial fever prevail in the Southern Atlantic States from early in August to the middle of October, or until the first killing frost, and then it vanishes with a suddenness and prompness that is remarkable. This disease among the profession and among the people invariably passes under the name of typhoid. In the Southern Atlantic States the disease usually runs a course of from three to six weeks. In the tropics from three to four months, according to Dr. Lobos.

Pernicious or Congestive Fevers.—This form of fever is not unfrequently seen in the lower Atlantic and Gulf States during the autumn months. It is noted for the suddenness of its onset, the rapidity of its course and termination. Its chief characteristics are sudden chill protracted over many hours, either without reaction or followed by very imperfect reaction. In this imperfect reaction the head and body may be intensely hot while the extremitics have the coldness of death. I have seen cases of this fever in which the extremities and surface were icy cold while the thermometer in the rectum denoted 106½°.

Malarial coma is a frequent feature of these cases. The pupils are widely dilated. The tongue is cold and very palid. In some cases there is intense nausea and vomiting. At times the pulse is slow; at others rapid and very feeble. The cardiac sounds are very indistinct and scarcely audible. Hæmaturia is not an unfrequent symptom, and albumen is often found in the urine.

The degree of malignancy of pernicious fever must be regarded as the measure of the extent to which the corpuscles of the blood have been disorganized or destroyed by the plasmodium malaria. It is difficult to say what proportion of these corpuscles may be disorganized without producing fatal results, whether a fourth, a third, or a half. But in pernicious fever a very large proportion of blood corpuscles must speedily be rendered unfit for circulation and purposes of life. It is altogether probable that the peculiar phenomena of this fever are due to this pathological fact. The prolonged chill, the extreme reduction of temperature, the imperfect reaction, and finally, the intense and extensive congestion of the internal organs are all due to the fact that the blood corpuscles to a large extent have been disorganized by the malarial parasite or have lost their amæboid characteristics and find fixed lodgment in the capillaries of the internal organs, as the lungs, liver and spleen, and in these organs cause immediate congestions.

In those cases where reaction and restoration take place what becomes of the debris of these broken down corpuscles is an interesting question. They exist in the congested organs as effete material that must be gotten rid of before there can be a restoration to health. It converts this effete matter into new forms fitting it for elimination from the system, becomes the work of that potent agent oxygen. By the action of this wonderful agent the debris of broken down corpuscles is converted into urea, uric acid, creatine and creatinine forms perfectly adapted for elimination by the renal organs.

True congestive fever like cholera is a disease rapid in its incipiency, rapid in its onset, rapid in its course, and sudden in its termination when fatal, and treatment to avail anything must be prompt, as every minute counts for much in arresting its progress.

A marked feature in pernicious congestive fever is malarial coma. This symptom usually sets in when the algid stage is at its climax. It is often impossible to arouse the patient. The pupil refuses to respond to light. The powers of sensa-

tion are often lost. You may handle many of these patients rudely and roughly. You may prick them with a sharp instrument and the nervous system fails to respond. The nervous centers are profoundly intoxicated with the malarial poison. Yet the coma of malaria resembles neither the coma of appoplexy or anæmia. It is wanting in the stertorous breathing and hæmiplagic symptoms of the former and the convulsive features of the latter. The patient is in an apparent profound quiet sleep. The breathing is slow and not labored.

The prognosis of pernicious congestive fever is always bad. A certain proportion of these cases die and never react after the first chill. Another proportion die during the second and third chill. But as a rule these latter cases never fairly and fully react. If the patient only partially reacts after the first chill and suffers a second chill he generally succumbs in the second. In many of these cases such is the extent of disorganization of blood corpuscles from the first onset the case is fatal from the beginning, and is beyond the reach of remedies.

The rate of mortality is always very high. It ranges from thirty to sixty per cent.

Differentiation Between the Symptoms of Typhoid and Prolonged Malarial Fever.—In differentiating between the symptoms of the two diseases; the curves in the temperature of the two forms are really almost if not in perfect resemblance. The prodromic symptoms, while alike in some particulars, are dissimilar in others.

During the prodromic stage of prolonged malarial fever there are always present decided neuralgic features common to malarial poisoning. These are almost invariably absent in typhoid fever. In typhoid diarrhœa is invariably present. In malarial fever the opposite is usually the case. In typhoid fever there can usually be detected on pressure in the right illiac region distinct gurgling. The rose colored eruption over the abdomen is usually present in typhoid, and absent in malarial fever. Tympanites is invariably present in the second stage of typhoid and absent in malarial fever. In the latter a state of retraction of the abdominal walls usually exists throughout its progress. Hemorrhage is a not unfrequent occurrence in typhoid fever, and is never present in malarial fever.

But the most characteristic difference is found in the presence of the malarial parasite.

The presence of this body at once is sufficient to determine the nature of the case.

It will not do in these cases to depend upon the curves of temperature as a means of diff. rentiation. I see cases of prolonged malarial fever every season in which these curves resemble perfectly those of typhoid. They possess all their gentleness, their slightness, their evenness, slowness, similar to typhoid fever. They have none of the sharpness, suddenness, abruptness, or extreme character of acute malarial fever. The rise and fall of tuperature is moderate, never sudden, abrupt or extensive throughout. In this way the curves of temperature in the prolonged variety are often deceptive and misleading.

A large majority of medical men of my acquaintance, as a matter of differentiation between prolonged malarial fever and typhoid. depend largely on the character of the curves of temperature.

Another feature very much depended on for diaguosis is the continued form of fevers assumed by malarial fever in the adynamic stage. These are all deceptive and fallacious tests. I regard the proper differentiation between the prolonged form of malarial fever and typhoid as a matter of infinite importance, as the treatment of the two diseases is entirely distinct and as a question that can only be settled by the microscope.

Treatment of Autumnal Fevers.—I know of no subject in the practice of medicine, with the exception of typhoid fever or tubercular phthisis, of more importance and that merits our careful and scientific consideration, more closely than that of the treatment of the autumnal fevers of our country. These fevers are not only an annual visitant of the Atlantic States of the Seuth, but their visitation always brings distress, trouble, suffering and too often death, and may ever be regarped in the light of a calamity.

Prophrlixis.—It is conceded by all authorities that malaria enters the human system either by means of the air we breathe, or the water we drink, or through both of these channels. For many years it was the accepted opinion that the air

was the only common carrier of malaria. More recent carefully conducted experiments go to prove that water is the true carrier of malaria. If this be true it is obvious that we have at hand a far greater command of the situation in instituting measures for the protection of the human system against malarial poisoning. Frost snd malaria are deadly enemies. When water sinks in its temperature to the degree of 32° F. all malarial germination and life cease, and after that water in the most malarial districts may be imbibed with impunity. Our water supply according to the latest and most reliable rcientific expeiiments, is to be the field of future hygenic investigatic and operation, in regard to the question of malaria and its entrance into the human system. Formerly drainage, the clearing up of swamp lands, tillage and improvement of the soil, were the only hope of those residing in malarial districts. Since the discovery that water, if not the chief, is a common carrier of malaria, another and a senewed hope has arisen for those who are yearly subjected to maiarial influence and that hope lies in a supply of purified water. If this be true, and all the evidence points in that direction, those who reside in the most deadly malaiial districts may not despair for, by a little expense and not much labor, they can command the situation. It is a very well established fact that malarial infected water is confined to that on or near the surface of the earth. The deep reservoirs of the earth, which can only be penetrated by artesian wells, are free from malaria. But the expense of this resourse renders it impracticable in many sections. But a resource available for the poorest and humblest in malarial regions is that of *sterilized water*, which has been subjected to the boiling point. But sterilized water while its malarial parasites have been killed by the action of heat, nevertheless contains a certain amount of dead organic matter. From ths objectionable element sterilized water can be freed by filtration. Certain products of Cinchona undoubtedly possess prophylactic powers in addition to their curative properties. Quinine its most important product must be regarded in addition to its multiplicity of medicinal properties as an intidote to the malarial poison. And it has a claim to be ranked among the chemical antidotes It arrests fungoid generation and growth, by arresting a l fermentative action in the blood. If the article quinine possesses the chemical property of accomplishing these objects, it is entitled to be ranked among the antidotes for fungoid growth and fermentative action in the blood.

Its well known antipyretic powers in fevers are no doubt due to its remarkable antifermintative action. But regardless of all theory on the subject well attested experiments in its use as a prophylactic in all malarial regions as the Southern Atlantic and Gulf States. East and West Indies, have established beyond a doubt its prophylactic powers. Ten grains of the bisulphate taken in a glass of Sherry wine before breakfsst and previous to all exposure when combined wtth the systematic use of sterilized water, will ensure protection.

I think in filtered sterilized water we have the ideal nonmalarial drinking water for common use by residents of malarial districts,where other resources as artesian wells are impracticable. However much water may be impregnated with the malarial parasite, in sterilization and filtration we have a certain means of purifying it and rendering it fit for human use. By the process of sterilization the vitality of the parasite is destroyed. But that does not remove the dead organic remains from the water. That can only be accomplished by a thorough process of filtration. Hence, safety lies in a combination of sterilization and filtration.

The rate of mortality in the prolonged form of malarial fever, or the so-called typho-malarial fever, is about equal to that of true typhoid fever. The rate of mortality of pernicious congestive fever is very high. It not unfrequently reaches fifty or sixty per cent.

In the treatment of thes diseases the important question arises, can we by any known means modify the types of these fevers, by rendering them milder, and at the same time reduce their rate of mortality?

These are questions of paramount importance. I believe that by proper treatment these objects can be accomplished.

Quinine is the only certain and acknowledged antidote to the parisite of malaria.

But its efficiency as such depends absolutely upon the manner of its administra-

tion. Given according to certain rules it is a remedy of great precision. Given according to other methods it is entirely inefficient. There is much in the manner of giving remedies, and even the most valuable and potent may fail if given without proper method or system.

Forty years ago it was the custom to give quinine in malarial fever in doses of one grain every hour, or two grains every two hours, or three grains every three hours. Well do I remember the utter inefficiency of the remedy in modifying the type or reducing the rate of mortality. By this method the system failed to get sufficient of the antidote to destroy the parasite. In giving this antidote it becomes somewhat a question of mathematical calculation. We must guage the quantity of our antidote to the amount of the parasite in the system and the gravity of the case. Not only this, but the remedy should be given in large doses at longer intervals, rather than in small doses at shorter intervals. Thirty grains given in ten grain doses three times daily is far more efficient in the remittent forms of fever than the same quantity given in two grain doses every two hours. Twelve grain doses morning and evening act more decidedly than twenty-four grains divided in small doses every hour. In decided form forms of fever Quinine should never be given in small doses, however often repeated. I have repeatedly seen cases in which one or two grains were given every one or two hours without the least effect, when the same quantity per diem given in three equal parts three times a day changed the entire aspect of the case promptly.

For many years I have taken every opportunity to experiment with quinine in malarial fevers with a view of ascertaining in each form and stage of fever the quantity of quinine that was necessary to act as a destructive antidote to the malarial parasite.

I found by experiment that in the treatment of iniermittent fever, fifty grains of quinine given within thlrty-six hours preceding the chill, was the maximum quantity required to arrest the disease. Thirty grains given within twenty-four hours preceding the chill, in a majority of cases would arrest it, but not invariably. I found that five grains of acetanilid given just before the chill invariably modified the chill and resulting fever. In regard to chronic chills and fever, I found ten grains of quinine given in Sherry wine before breakfast, and Warberg's tincture in full dose after dinner and supper, almost invariably acted as preventives.

Quinine should never be given in pill form, as they are slow to dissolve, and frequently do not dissolve in the stomach at all. It is preferable to give it in solution or powder as the bisulphate, or lastly in fresh capsule. I am satisfied that a certain proportion of cases are lost, because of the insolubility of pills. I have repeatedly seen in my practice cases grow worse daily under the use of the quinine pill, that improved rapidly when the solution or powder was substituted.

Then again in cases of great emergency when we desire prompt action, in my experience, the bisulphate is the most certain form in which it can be given.

In the application of this remedy as an antidote to the malarial piasmodium we must be governed by fixed laws and practical rules or failure will be the result.

It is certainly true that we have all grades and types of malarial disease from the mildest to the most malignant and we must adopt our measures to these different grades or we cannot have success. I found in my experience in the past thirty years in about one hundred and seventy-five cases of malarial fever beginning suddenly, with a decided chill, and followed by a temperature running up rapidly to 105° or 106°, with intense neuralgic pains, sixty grains of quinine per day of twenty-four hours, given in divided doses of ten grains every four hours, would invariably arrest the attack in seventy–two hours, and frequently in less time. Thirty grains per day would prolong the attack to five or six days, especially if given in three grain doses every two hours. Twenty grains per day would prolong the attack between one and two weeks, and fiifteen per day would prolong it from three to four weeks. These facts teach us the important lesson that to obtain the full antidotal effects of quinine we must saturate the system with the remedial agent promptly in quantities sufficient to kill every malarial germ in the system. Otherwise, if a single germ is left in a living state it becomes the neuclens for

rapid germination and multiplication, and our work must be done over again.

The question arises whether, in these violent types of high temperature, we have any means at hand to facilitate, or promote the action of quinine. I can answer this question emphatically in the affirmative. I find that during the febrile exacerbation, when the temperature is high, the skin is very dry, the pulse frequent, five grains of phenacetine, and three of acetanalid given every two hours acts charmingly in lowering the temperature, composing excitement, and inducing perspiration, and in this way aiding the action of quinine. Then there is the additional means of sponging the surface with cold water and alcohol. But in those cases of hyperpyrexia, with a temperature of 106° or 107°, threating a speedy termination of life, the cold poultice enveloping the chest, abdomen and spine, and changed every two or three hours, has done me most excellent service. Thus we have in this class of cases numerous and valuable resources in aiding and facilitating the action of quinine in doing its work.,

Next in order to be considered is the treatment of the prolonged variety of malarial fever.

The prolonged form of malarial fever, if neglected or improperly treated, is certain, about the third or fourth week, to pass into the adynamic stage.

The questions arising in treating this form of fever are whether its type can be modified, its progress curtailed, and the adynamic stage be averted.

I can, with the utmost certainty, answer this question in the affirmative. But in our treatment we have a persistant disease to contend with and our treatment must be systematic, constant and active, and as sure as we lapse into an expectant method, or relax our efforts, the progress of the case gains on us every hour, and it will pass into the adynamic stage. There will be increase of temperature, of pulse rate, and the rythm of fever will disappear and it will assume a continual form and then the stage of delirium appears with all other ataxic symptoms. If we expect success in our treatment the antidotal treatment must be commenced from the earliest stage and never relaxed to the end.

Twenty grains of quinine, divided into three equal parts, given three times a day, will maintain the case in its simple type. Keep the temperature down to 101 in the morning, and 102 at evening, prevent typhoid symptoms, or other complications and finish up the case about the third or fourth week.

A very interesting fact will be noticed in the therapeutic action of quinine here in its power to preserve the case in its simple rythmic form of fever and uncomplicated state with moderate temperature, with clear mental faculties throughout. Ten grains of bisulphate of quinine three times a day in a case of this kind will usually carry it through a course of two weeks and finish it up in that time.

I am convinced of the importance of the patient having every night for restful sleep. It will be observed that in all of these cases the medicine and nourishment are administered during the day.

If signs of insomnia appear the patient invariably has at night a hypodermic of morphia and atropia.

The percentage of mortality in the cases treated by this method did not excced two per cent.

In regard to the treatment of the pernicious form of congestive fever, I will briefly cite the history of a case for purposes of illustration.

Case 1. Adult aged 30, robust constitution, had a chill which lasted twelve hours before signs of reaction.

He was in a profound state of coma. The pulse was exceedingly feeble and very rapid. The temperature under the arm was 90°, in the rectum 106°. The extremities and surface were deathly cold, pupils dilated. Sixty grains of quinine, in a half pint of milk punch were injected in the rectnm ; the fiftieth of a grain each of strychnia and glonoin were injected under the skin. Dry heat was abundantly applied to the surface. These remedies were repeated by hypodermic every two hours. In twelve hours signs of reaction began. Consciousness was gradually regained, reactive fever set in, followed by perspiration. The patient had two drachms more of quinine which prevented effectually a return of chill.

I desire here more particularly to allude to the action of glonoin in connection with quinine in these cases. Those who have observed the course of pernicious congestive fever have noticed that the blood almost entirely recedes from the

surface and extremities to the internal organs. Probably three fourths of the circulating blood has accumulated in the brain, lungs, liver, spleen, and intestine, while the arterioles of the surface are in a state of contraction.

The action of the glonoin is to promptly dilate these vessels to invite the circulation back to the surface and extremities, and to produce reaction.

The prolonged chill of pernicious fever and the difficulty of reaction mean the destruction or disorganization of a large proportion of blood corpuscles, and the intense internal congestions mean that these dead or disorganized corpuscles have lodged in the capillaries of the internal organs and are in a state of stasis. Without nature can again throw these dead and disorganized corpuscles back into the general circulation, which we term reaction, where they may be disintegrated and converted into uria, uric acid, creatin and creatinism, and in this form eliminated from the system, the result must be fatal. Hence all of our endeavors in these cases are to produce speedy reaction, and to destroy the life of the parasite of malaria, and finally to eliminate it from the system.

Some Questions Concerning Appendicitis.

By R. L. Payne, M. D.,*

My excuse for presenting for your consideration to-night a subject which has been so much discussed by the medical profession in the past few years is that there are several questions concerning appendicitis which are not yet satisfactorily answered, and I trust my cursory remarks may lead to a free discussion so that from the combined experience of this Society much light may be thrown in dark places. Are cases of appendicitis becoming more frequent? It has seemed very curious to me that appendicitis should have become of such frequent occurrence in the past few years. It is not a very satisfactory explanation to say that only within a few years have we been able to diagnose the condition, for although we did not diagnose appendicitis as such we did recognize cases of typhilis, pentyphilitis and paratyphlitis, which, as we now know, were all primarily cases of appendicitis, but we saw such cases but rarely. I venture to say that the greater number of the older practitioners during any period prior to 1885 could have counted their cases of typhlitis, peri and paratyphlitis on their ten fingers; but now almost all of us see a half dozen cases each year, and, as before intimated, it is not enough to say that formerly these cases were overlooked because as we now see appendicitis did we make many failures in diagnosis the records of autopsy would soon serve to enlighten us. We are forced to this conclusion then, that either appendicitis unrecognized and untreated is not a very dangerous malady, or that for some unexplained, and at present unexplainable, cause cases of appendicitis occur more frequently now than formerly. Of course this apparent increase may be due to faults in diagnosis, for only a few days ago a member of this Society told me he was treating a typically symptomatic case of appendicitis in which he knew the appendix had been perfectly removed, and in my own experience it has not been infrequent that I have seen other maladies diagnosed as appendicitis. I have seen cases of ovaritis, pelvic peritonitis, rheumatism of the abdominal walls; the pains attending the passage of a renal calculus and faecal impaction in the cæcum all cause errors in diagnosis. A still rarer cause of error is found in the following case from my note book: In March, '94, I was telegraphed to go to a neighboring town to operate in a case of appendicitis, but when I arrived I found the patient's condition, as compared to the record of the previous day, much improved. Her temperature was only 100°, and examination revealed the presence of only a small tumor in the usual situation, which the attending physician, a very competent man, assured me was growing decidedly less. I concurred in the diagnosis, but advised delay, and as the advice did not meet the views of the medical attendent, it was decided to call in consultation a New York physician of world-wide repute in the treatment of these cases, who happened to be gunning in the neighborhood. Dr. McBurney very kindly came to our assistance, and after a careful

*Read before the Norfolk Medical Society.

examination of the patient under chloroform, agreed in the diagnosis, but also counseled delay until all the acute symptoms should subside.

Nothing further was heard of the case until about two months later I was again telegraphed for to operate on this patient for appendicitis. I could not go but another physician did operate, found a perfectly healthy appendix and the cause of the whole trouble a stricture of the ascending colon near the cæcum. I learned afterwards the lady never fully recovered from the first attack, but always complained of some pain and soreness in the right iliac fossa, and there was always present slight tumor when suddenly there occurred acute symptoms and she had an operation with the above result.

Another question of interest is what importance in diagnosis should attach to the presence or absence of "McBurney's Point"?

If you mean, as seems to be the common acceptation, a point of greatest tenderness midway between the umbilicus and the anterior superior spine of the ilium on the right side, I should not consider it by any means necessary to the diagnosis. If "McBurney's point" were present all well and good, but if it were absent in the presence of other symptoms, I should not hesitate to diagnose appendicitis. When we remember how often the appendix is absent from what we regard the usual situation, sometimes even being found to the left of the median line, we will readily conclude that we cannot find this point of greatest tenderness always at any given spot. This, however, is true, that having diagnosed appendicitis then we may search carefully with the point of the finger for the greatest tenderness, and if we can locate it we can very confidently expect to find underlying it the inflamed appendix, and this, regardless of situation, is the true "McBurney's point." If you accept this view it is apparent that "McBurney's point" is more important as a guide to the appendix in operative procedures than in diagnosis.

One more question and then I am done: How shall we treat cases of appendicitis and when is the time to operate?

To me this is the most difficult point in the whole subject. I believe the mortality of this disease is variously estimated at from 12 to 25 per cent. No doubt the vast majority of these cases get better without operation, but in many of these relapses, more or less dangerous, are sure to occur. Again, it is no unusual thing that fulminant cases are seen, and in a few short hours pus is poured out into the peritoneal cavity to be speedily followed by death, and yet these cases differ little in their early symptomatology from others ending in recovery under medical treatment. I recall the case of a young farmer, strong and healthy, who was one day seized, while in apparent perfect health, with sudden, severe pain in the right side of the belly, accompanied by intense nausea.

I saw him five or six hours later and diagnosing appendicitis advised operation on the following morning if not relieved. This advice was declined, but on the following morning suddenly the pains became more diffused, the signs of intense shock supervened, and less than 24 hours later he was dead, having never rallied at all from the state of collapse. Had I operated within twenty-four hours of the advent of the first symptoms I would have been too late, and yet at my first visit this man's condition indicated no more gravity than I have seen in many other cases who have recovered under simple medical treatment. How are we to know these cases with sufficient precision to feel certain what action shall be pursued? And still there is another class of cases in which all the symptoms abate and the patient is apparently on the high road to recovery, but the convalescence is tedious; more or less pain and soreness are felt after exercise; there is slight rigidity of the right rectus muscle and if we should operate we will usually find a condition of the parts highly dangerous to the patient, because liable to explode at any moment with symptoms so intense that nothing will allay them. In these cases an abscess may be found fully formed, or the appendix in any stage of degenerative inflammation.

The following cases are illustrative:

A. B. was riding in a wagon when one wheel slipped from a large stone severely jarring the patient and throwing him from his seat. He was at once seized with fever, pains in the lower abdomen, and this was followed by vomiting and high

fever. Previous to this time he had suffered two or three attacks of pain and tenderness in the right iliac region, but had not been attended by a physician. The pain and fever continued unabated until on the fourth day I was called in consultation. As patient lived some distance from me I did not see him till the following day. During the night previous his temperature had fallen to 99°, and the pain had disappeared, but the history of the case and the presence of a rather doughy mass in the right iliac fossa made me determine to operate at once. The usual incision revealed a large abscess walled off from the general peritoneum and containing a pint or more of pus.

G. D. came under observation with the following history: A year or more previous he had suffered rather severe pain for a few days low down in the right side and since this time there had been more or less soreness remaining all the time, but growing worse at intervals. The pain was never so severe as to entirely stop him from his business, but was constant, and his general health had failed materially. Palpation revealed decided tenderness in the right iliac fossa, with a point of greatest tenderness about the center of a line drawn from the umbilicus to the middle of the fossa. No tumor could be made out. The usual incision being made the appendix was found much enlarged, œdematous and with slight adhesions to the walls of the cæcum. On removing the appendix and slitting it open its walls were found ulcerated at several points and at one spot all its coats had been eaten through except the peritoneum. In one of these cases which I have cited perforation occurred about the end of the first twenty-four hours, leading to a rapidly fatal result; in another instance, though the symptoms at one time were grave the acute signs rapidly disappeared, and yet operation revealed a large collection of pus which might at any time have ruptured into the peritoneum with fatal termination, while in the last case cited there had been no acute symptoms, in fact the symptoms were so slight as to scarcely warrant the diagnosis of appendicitis, but operation reveals a condition of the appendix liable at any moment to precipitate the patient into all the dangers of a septic peritonitis.

In the face then of such uncertain indications of danger, how are we to treat these cases? I believe the absolutely safe rule is, as soon as the diagnosis is established, if you feel yourself to be a thoroughly competent surgeon, or if a thoroughly competent surgeon can be obtained together with proper assistants, and everything necessary to aseptic operative technique, then an operation for appendectomy should at once be done. Every hour lost at this stage may contribute to a fatal result, and the mortality following operation for removal of the appendix before adhesions have formed, perforation has occurred, or pus made its appearance, I think should be nil. If competent surgical aid, and I mean thoroughly competent aid, cannot be had, then I think the chances of the patient during the first few days will be better under a purely medical treatment than they will be under an operation poorly performed. As to what the exact plan of treatment shall be my habit is to pursue a plan somewhat different from that usually advised. I think the plan of treatment generally advised is to give saline cathartics until the bowels are unloaded and then further peristalsis is prevented and pain relieved by opium. In the words of a late authority, "except during the incipient stage cathartics are *positively contraindicated* until the acute symptoms have subsided and the danger of perforation is passed." I think this advice is too unqualified. Of course no one would think of giving drastic cathartics in any inflammatory condition of the alimentary tract, but speaking from a medical standpoint I regard epsom salts as the sheet anchor in appendicitis. I give opium or morphia at any stage to relieve excessive pain, always using as little as possible, because to a certain extent all opiates serve to mask symptoms and lull us into false security, but I give epsom salts first, last and always, until I am satisfied medical treatment will not avail. In the very beginning I withhold fluids from my patient, and I give the salts in drachm doses, dissolved in as little water as possible, and repeated every hour until free watery actions from the bowels occur, and then increasing the length of the interval, I continue the dose sufficiently often to produce four or five free watery stools in the twenty-four hours, limiting the number of stools only in accordance with my estimate of the

patient's strength. I am aware that this plan of treatment is subject to adverse criticism, and so I shall endeavor to explain my idea of the rationale of the method. I think the advice to absolutely withhold all cathartics is based on the idea that all cathartics act by simply increasing peristalsis and that any amount of peristalsis will increase that paramount danger—perforation.

Perforation, however, is the result of ulceration, and the danger of perforation, until the bowel is so nearly ulcerated through that this accident is well-nigh inevitable, is very little increased by the gentle vermicular action of the intestines as such action would be *rather remotely propagated* to the appendix, but on the other hand when we remember that the ulceration is usually in proportion to the intensity of the venous congestion we will be bound to admit that any agent which will limit the inflammatory process will be useful in preventing perforation or gangrene of the appendix. Such an agent is found in epsom salts when properly administered.

This remedy, more than any other, increases the secretions of the intestines with a minimum increase of peristalsis. After its administration the intestine will secrete fluid to the point of making a 5 per cent. or 6 per cent. solution and then largely by *dynamic* influences, with very slightly increased peristalsis, which is simply the result of distention, this large amount of fluid passes into the rectum and is expelled. It follows then, that the more concentrated the solution of the salt administered the greater the quantity of fluid abstracted from the blood vessels of the intestinal walls, and hence the greater the local depletion, for no sooner is the volume of the blood in the vessels diminished than they begin to absorb fluid from the tissues about them, and so by the constant emptying of the blood vessels by the action of the salts in the inflamed area and their alternate refilling by absorption we have a constant draining of fluid from the inflamed tissues and hence a lessening of the inflammatory process.

This drainage in the case of appendicitis is usually direct, because it is rarely the case that the appendix has a true mesentery, but obtains its supply of blood from some of the vessels of the cæcum. Now then I believe that the good accomplished by the salts as above described far outweighs the danger of perforation from increased peristalsis, and I wish once more to emphasize that epsom salts is very little provocative of peristaltic movement and usually purges in an entirely different way. But I fear I weary you with my reasons for the faith that is in me and so I will only add that in addition to the remedies above detailed I am in the habit early in the case of applying ice bags locally, hoping to limit the *extent* of the inflammation, but later, if the inflammatory process advances, I abandon the ice bag for the use of turpentine stupes and other hot applications, both because these seem to add most to the comfort of the patient and possibly promote adhesive inflammation.

This plan of treatment is persisted in until I become satisfied no good is to be accomplished by it and then, as a last resort, the knife must be used. Just when medical treatment should be abandoned cannot be accurately determined as each case is somewhat a law unto itself, but if after persisting in the above described plan of treatment for a varying period, usually from forty eight to seventy-two hours, I find no improvement in the condition of the patient; if the pain and temperature are growing no less; if the tumor is increasing in size; if the pulse remains quick, or is growing in frequency, then I should not counsel further delay, but believing the only hope of the patient lies in operative interference I would advise the use of the knife even though the operation must be done by comparatively unskilled hands, for I believe the patient's chances are now so rapidly narrowing down as to warrant even desperate measures as a last resort. Of course evidences of perforation at any stage demand operation.

It is not the purpose of this paper to deal with the technique of the operation, and so I will close my remarks by expressing the hope that the questions I have propounded, and in a feeble way tried to discuss, may be freely discussed by this body, and from your larger experience much light may be thrown on some questions of importance still remaining unsettled.

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The Science of Generation and Its Phenomena.

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"But I see another law in my members warring against the law in my mind."

Divine and human laws clearly point out the great truth that generation is the foundation of human hope and despair, and life is the inheritance of progenitors. Perfection is written upon nature's laws, and everywhere the eye beholds nature's complete work the thought is impressed in the words, "Consider the lillies of the field, how they grow, they toil not neither do they spin, yet even Solomon in all his glory was not arrayed like one of these." "And God blessed them and said unto them, be fruitful and multiply and replen ish the earth."

In the beginning nature's work was complete in all its parts and perfection was written upon creation. "And God saw everything that he had made, and behold it was very good." Correct observation is a talent in man that should be cultivated as well as the power of description which enables him to form correct conclsions and impart them to others. The eye is brightened and the heart rejoices when the mind is illumined by the observation of nature's perfection. Infinite wisdom is portrayed in nature's handiwork, and the heart rejoices and the mind perceives that there is a Divinity in all her works.

A disturbance in vital force destroys proportions of parts, normal symetry and natural blending of colors, so that the law of perfection is impaired. Disturbances and transplantation produce that which is deleterious to vital growth and strength. The student of animated nature will observe that the laws which prevail are uniform, and the results of these unbroken laws are perfect. Conditions and environment are equally distributed in the universe for the perfection of the distribution of animated nature. The highest and best results are obtainable under the careful observation of nature's productions when her laws are best preserved.

We know that man has in his cruelty destroyed much that entered into his primary existence, and that disease and decadence are the lhgitimate results. Life is impaired and abbreviated by the destruction of the conditions that enter into its oausation and normal development. The earth and its productions are impaired and destroyed by the removal of the conditions provided for its sustenance and growth. The transgression of natural laws has impaired and in many instances destroyed the vital products of the earth. Animal life in different species has become almost extinct through man's wanton cruelty and destruction. Humanity is appalled and the organization of laws for the protection of animal life and its preservation has been established. It may be pertinent to remark that "man's inhumanity to man makes countless thousands mourn."

To the mind of the careful student of nature this truth is painfully and awfully impressed in the wanton destruction of animal life. The earth is robbed of her fullness and thereby God himself for the earth and the fullness thereof are the Lord's. Seed time and harvest in different locations in our country are no more observed, and the dwellers have abandoned these places. The earth is robbed of her forests and the benefits arising from their presence in different ways is denied to animated nature and the evil results are everywhere evident.

The virgin soil, with its forests and fountains of pure water and its atmosphere devoid of the causes that tend to disease and death is a matter of history. We read of the noblest and best specimens of our race coexistent with the youth of our country, but the conditions and environment of mankind at the present are entirely different, and the effects upon the people only too apparent. If the conditions of our forefathers were present and our educational advantages afforded it would be interesting to observe the results. When we consider that one-seventh of the entire population die of tuberculosis, and its effects, not to take into notice the evil consequences of syphilis, and other maladies that devitalize man and render him liable to early decay and death is it not time that we consider our vital existence ere our race perishes from off the earth? Intemperance in eating and drinking, and the indulgence inordinately of the passions with excesses of different kinds admonish the student

of nature that we live in an age of excess and debauchery.

The evil tendencies of the causes referred to are too apparent upon the moral and physical life of the youth of our age. The splendid moral character and physical organization of perfect manhood and womanhood are fast becoming extinct, and the effects upon posterity are too easily observed in the moral, physical and intellectual lives of our children. The effects upon the uncivilized races of the non-observance of the laws of procreation and development pointed out are the rapid degeneration and extinction of the different tribes. Our American Indian tribes have been almost destroyed by the causes pointed out in this paper.

Simplicity in our modes of living and the observance of the selection in marriage of suitable companions will do much to bring about the conditions conducive to better moral, physical, psychic and intellectual life. Nationalities are distinguished by the moral, physical and intellectual conditions of their subjects. The moral, religious, social, educational and other traits of character are the results of the influences of individuals, and these characteristics conform to the national governments of the nations.

Intellectual conditions distinguish the best types of physical growth and perfection, when not distorted by the practices that are antagonistic to the development of normal growth. Perfection in physical and mental development is the condition that attains the highest achievements in human possibilities.

Education betters the conditions of men and women; nevertheless, characteristics that are inate cannot be obliterated. The congress of nations and their intercourse has done much to modify, and, in many instances, better the moral, physical and intellectual conditions of their subjects. Life is in the abstract largely that which the individual elects that it should be, being governed entirely by that perfection in physical organization and development which is conducive to industry and attainment in that which the mind attempts to accomplish. Disease and abnormality are the conditions which impair and distort the individual, and the results are transmissible to a considerable degree to posterity. There is a law that pervades animated nature that impairs the results of procreation which is fortunately modified by the different conditions that enter into the individuality of its subjects. The continual multiplication of the elements that enter into life are not conducive to perfection in generations, but on the contrary a dissimilarity in first causes produce the best general results. Those nations and communities that continue in their own lines of reproduction become weak and distorted in physical and mental attainments.

It is observable that in physical development there is uniformity of confirmation and intelligence as well as perfection of the senses. Travellers have observed that in nations there are characteristic defects which are certainly produced by inate causes in progenitors and their multiplication increaser their organic results. It is established that races, communities and families can be recognized by their physical characteristics. The continuation of the same lines in generation produce results in offspring that are uniform in physical and mental development, and are gradually improved by lines of good tendences.

Education and habit have a benign influence in the modification of the law of heredity. Lines of good and evil propensities follow names in countries and communities, and the observation of good and evil that follow families should be classified as physical defects in organization producing lines of good and evil tendencies, which can be modified by good and bad blending in family lines. The degeneration of our American manhood and womanhood is largely obviated by the complexity of nationalities represented in our population. The influences that correct deterioration of the different races are of the most benign character and the results are most salutary in the blending of the best family lines. Characteristics of good or evil are the legitimate results of physical perfection or distortion of either good or bad personal development.

I can not emphasize too forcibly the truth, "Do men gather grapes of thorns, or figs of thistles." The evil propensities and characteristics of human character are certainly caused by organic defects and are just as certainly transmissible in anomalous anomatic organizations. Scientists have made some advances in the observations made upon physical organic

defects that attend certain criminal actions and these defects are placed as mitigation theories in the defence of crime against persons. It is a law that prevails in man and animals that physical characteristics and mental inclinations are transmissible and that avoidance of the evil lines in the multiplication of the race, or species, is of vital importance. The argument has been adduced that education and association modifies and eradicates evil conditions and their tendencies, but it has been too often demonstrated that the removal of offspring from all influences that might be prejudicial to those that are salutary, and the propensities and characteristics of progenitors prevail.

Darwin has investigated the science of decent, and has applied the laws that govern animal life in its varied forms and draws conclusions that are of intestimable value in the investigation of life and its legitimate results. The survival of the fittest is doubtless true. but a careful study of geology satisfies the mind of the careful student of natural science that our computations of time do not accord with the chronology of the earth's formations. In the chaotic ages the natural conditions existing at these periods were annihilated, yet the prehistoric evidences are not confirmative of a common origin of species.

The capabilities of man are measured by a just consideration of his physical perfections and power of mental attainment. The best intellect may be hindered by imperfection in physical organization, or distortion of the members of the body. An analysis of the lives of one hundred men and women who were preeminent, showed that the qualities that entered into their individualities were of the highest and best character in lines of genealogy, that were in no way akin to each other. The prevalent opinion prevails that genius is inate and that it is the result of natural laws in fixed lines of inheritance. The sum of ultimate good accomplished by the brilliant intellects is so great in the education of the masses, that a just estimate cannot be computed, neither can the inflnence upon posterity be estimated. It is interesting when we consider the extent to which evil in generation may blight and curse posterity and the anomalous conditions that may be its results in degeneration.

Prof. Belman, of the University of Bonn, reports the case of a wanton and notorious drunkard, that is most interesting on account of the continual line of offenders from an individual. Born 1740. Died 1800. Her descendants were in number rather unusual—834—of whom 709 were traced from birth. The degenerations of those traced, 7 were convicted of murder, 76 of other crimes, 142 were professional beggars, 54 lived on charity, 181 women led disreputable lives. This family cost the German government for maintenanee and costs in almshouses and prisons $1,250,000, or a little less than $1,500 per capita. This would seem a remarkable report, but no doubt it is so on accout of the care taken in tracing the records. We seldom look into the cost of maintaining the degenerate, but a study of the reports of prisons, almshouses, reformatories, hospitals and other institutions established for the care of the degenerate and poor, enables the mind to grasp, in a limited manner, the enormous sum that is yearly set over and contributed to defray the legitimate expenses incurred in providing for these classes. Were it not that the latter classes are in the minority the burden would become so great that it eould not be defrayed, and even now it is a serious economic problem. The conclusions arrived at as to the results of the union of individuals in generation are certainly in many instances correct, and it may be observed that opportunity and environment have little power to modify organic conditions that are inate. Like conditions produce like results, and that so-callad freaks of nature are the consequences of the physical conditions that beget them. That preconceived desires influence the results of differential unions is undeniable, but are at the same time governed by the lines that predominate in their progenitors. The immediate and remote influences that prevail in anima life are traceable in a wonderful degree to the histories of lines alone that can explain that which seems incomprehensible. Humanity in its varied conditions is a most interesting vital study, and the results that follow life in its eomplexity are the sum of good and evil physical organizations that enter into generation. "There is a divinity that shapes our ends, rough hew them how we will."

It is not possible to change the phe-

nomena that follow natural physical conditions in organic life. Civilization in man corresponds with domestication in animals. Domestication is beneficial in the improvement in species, as it is controlled by man in a careful study of the qualities which tend to improve and strengthen animal organization. Man in the constituents of his body does not materially differ from animals, yet the science of generation conclusively teaches the student of animated nature that groups and families have essential differences that can not be reconciled with the theory of common origin. That the commingling of the elements in generation of two beings produce certain results that partake of the physical and mental characteristics of both, as well as tribal predominance is the ultimate result of all human and animal procreation. Theories prove little, but phenomena establish and confirm all things when correctly understood.

When we study phenomena in animate and inanimate nature we readily comprehend the causes that enter into effects, and their uniformity sets at rest much that has been uncertain in the discussion of natural science. That which is not tangible can only be considered in a study of its phenomena, and through a logical course of reasoning be made plain in the establishment of the truth.

Characteristics, tastes and predispositions are inate and are the results of organic causes. The physiological harmony that pervades animated nature in the production of the best results in vegetable and animal life is the best when the environments are favorable. The early period at which traits are observable teach us that they are not the results of education, but orgauic perfections or defects. The inclination of the human mind to follow certain lines of thought and action are most remarkable, and efforts at changing natural tendencies thwart and otherwise render the individual unsuitable for the successful prosecution of the work that may have been placed before him for his possibilities in human effort.

The natural tendencies of individuals are apparent at a very early age, and it is not difficult to understand the adaptation and power to comprehend and accomplish that which is attempted, and the certain satisfaction that follows the best attainment. That congenital organic defects are transmissible is certainly established. The origin and development of the egg cell in the body of the mother and the fructifying influences of the seed of the father, thereby imbueing the offspring with the physical organic characteristics of both parents affect all questions which the human mind has ever raised in regard to generation and its phenomena. That imperfections in mental organization and the results that prevail in lines of evil tendencies, which can not be modified or eradicated by education or special training, and influences adopted to produce correct mental action. There is imperfect physical organization of the brain and spinal cord, and its action in psychical tendencies disturbed and demoralize society.

The tendencies of individuals in sanity are uniform and correspond to fixed lines in human thought and action. Intelligence and moral convictions do not overcome organic defect and the results which attend anomalous organization. Virtue and good tendencies do not entitle the individuai to special commendable consideration, neither does obligation rest upon those persons who have defective mental organizations. A study of over nine hundred convicts showed that ninety-five per cent. continued in the lines of evil conduct and action which had placed them bevond the pale of lawful society. The remaining five per cent. showed that a small percentage were innocently incarcerated, and the remainder were accessories after or before the facts.

Courts understand these penal institution reports and are governed in their administration of justice accordingly. First offences raise a question of previous character, and if a good reputation is established by evidence it is a mitigation in sentences. Second and subsequent offences receive the full penalties attached to the offences committed. It was demonstrated after careful inquiry that only a small number of the convicts has reproduced themselves in offspring, and it can be established that criminals intentionally or on account of penal servitude do not enter into the generation of the human race to any considerable extent. It would be a great advantage to the human family if persons of evil tendeneies could be deprived of the privilege of entering into the reproduction of our race, and thereby

prevent the transmission of the organic defeets that produced their evil phenomena.

Nature's highways and byways are so devious that we fail to discover her courses in the labyrinth of life and perchance we follow an *ignus fatus* that only demonstrates how we may be mislead and mistaken in our observations. In the complexity of nature's laws there is a universal equilibrium, and after all that is known it is folly in the scientist to attempt to change that which pervades animate and inanimate nature. Life is a subtle thing, and in our efforts to sustain and prolong it the nearer we follow the teachings of that which we observe and understand the more satisfactory to ourselves and those that claim our skill, and efforts will be our ultimate results. The violation of natural laws as well as perversion of functions is followed by malformations and deformities that afflict the offspring of those that are guilty of such offences. The sins of the fathers are visitsd upon their children even unto the third and fourth generations. The crimes committed by the perversion of functions are a sin against nature and a shame to humanity. These offenses against nature can only be hinted at in decent society, and the youth of our nation, in whom we confide the care and keeping of our social and national life and its preservation, should be warned and protected from the dangers that may destroy their physical, moral and social existence. Were it not for the confidences confided in our profession, by which we are bound in sacred honor to withhold the truth, we could record the awful results that arise from such transgressions of natural laws upon innocent posterity. The phenomena that we observe from such practices as are not to be mentioned are of the most painful and woeful character.

To the pure all things are pure, but we who know from our observation that in the truth of much that can not be recorded there are certain evil influences that certainly prevail to an alarming extent, which undermine and destroy many from off the face of the earth, whose death records would demonstrate that they bad been the victims of their secret sins.

The traditional belief that the conduct of every human being is the result of his own free will, or lack of education, rather than original physio-psychical constitution is certainly under the light of scientific investigation being reconsidered.

Born to crime is applicable to a class of criminals, and irresponsibility is recognized in criminal sociology as a just mitigation of offences against law and order. That taints of good and evil attend life from the moment it takes its beginning in the elements that enter into its inception is certainly a question of paramount importance in the reproduction of human life and character. The transmisibility of diseased conditions is certainly established, especially syphilis in its different stages, it qeing identical with that which exists in the progenitors at the time of conception. Conformation of the body and similarity of features partake of the characteristics in progenitors and are readily distinguishable in families. It is noticeable that males partake of the characteristics of the mother, and females of the father, although the temperaments of both are readily distinguishable in offspring.

The intimate study of the organic composition of the human brain in its atomic structure and molecular cell life enables the student to comprehend the phenomena we observe in human thought and action. The molecules have number, kind and shape, and doubtless this establishes their physiological actions. It is in this conception that we arrive at a correct conclusion and understand the nerve centers and their powers which are coördinated by the cerebellum and spinal cord.

Chemic and microscopic examinations differentiate between normal and pathological conditions, but do not discover the organic cause of deviation of thought and action. We form our conclusions of rational thought and action from that which we observe in lines that are coördinate and normal. The basis of sane and insane thought and action is in the coördination of rational conduct in that which the mind perceives. Perfection, or a near approach to it, in organic life is attended by phenomena that claim our highest consideration of vital energy. The more perfect the cerebral centres, and the material that composes their intimate structures with equilibrate comfor mation the better will be their manifestations. Conceptions of the human mind

are the results of environment, and the conclusions arrived at indicate the power of the brain and its equilibrate action. An index of the phenomena of life is plainly written in the contour of the body and its lineaments which portray human character. The visible traits that we observe in our studies of the human body in physiognomic features are largely correct, and it is the hand writing of inate organic perfection or imperfectton which is displayed in words and actions.

The philosopher declared that infinite wisdom was not displayed in organic life or human physiognomy, but rather the law of mistakes seem evident in the larger part of human creation certainly was not wanting in the power of observation. Perfect types of physical development, and mental power, are the exception, and degeneration is painfully evident in studies of humanity.

Phenomena are mental and physical manifestations in organic life and not the special idiosyncrasies of individuals. In the science of generation the *terra incognita* is to the physiologist, the subject that the scientist should not too carefully investigate.

Knowledge of how we begin life and its conditions is, therefore, too sacred for man's investigations, and yet a large part of the human family stifle, thwart and prevent the functions that enter into its normal causation. The evils that follow the prevention of offspring, as well as the perversion of the functions that enter into generation are undermining our social life which is the foundation of our civil and religious liberty.

The crimes of omission and commission that are committed in the physiological and pathological functions of generation are more potent factors in the destruction of life and health than all other causes combined. The evils and ills that afflict and destroy man are the results of perversion and distortion of the sexual function cannot be fully understood or described. The normal, legitimate exercise of the God given functions of generation are the very essence of life and happiness, on the contrary cause more mental and physical suffering as well as degradation of mankind than it is possible to conjecture or comprehend. We cannot understand the moral and physical results that are dependent upon the illegitimate exercise of the functions of generations. Society is continually disturbed and distracted, and individuals are disgraced and debased by the illegitimate and inordinate indulgence of the sexual functions. The diseases that are the result of persersion and inordinate exercise of the functions of generations cannot be enumerated, neither can the immediate and remote results be computed in the phenomena that characterize their physical and mental manifestations. Study the laws that govern and produce phenomenas and foresee their ultimate results. The crimes of prostitution are the bane of civilization and their demoralizing effects produce a line of evil tendencies that curse and debase mankind.

Prostitution is correctly placed in the list of crimes, and laws sufficient for its correction have as yet to be enacted, and social and moral efforts are unavailing for its correction. That prostitution is a necessary evil is certainly an evidence of the degeneration existing in the present generation. When we investigate the stigmata of degeneracy we readily arrive at the conclusion that there are modifications occurring during fatal development so that the organs of the body show the effects of the arrest of normal development. It is more especially in the central nervous system in the nervous organization which impresses heredity. The evolution of mind depends upon the organization of the brain and spinal cord, which influences the co-ordination of our mental acts and impulses. It is noticeable that congenital defects are transmissible in the heredity in generation. The nervous mechanism is responsible for the evolution of deviations from the normal types which produce anatomic physiologic and psychic anomalies, which designate phenomena. The influences which affect the nervous mechanism of heredity are drink craving, poisons, inordinate indulgence of the passions and the effects of different forms of neurasthenia. Congenital organic defects are hereditary to a considerable degree, and to the careful observer parental influences present at the time of conception can be traced in the physiologic and psychic phenomena of children. The determination of sex in offspring is hereditary and follows lines in progenitors—males partaking of the maternal and females of

the paternal influences in family histories. The inability in male progenitors to impart their characteristics to male offspring teaches the importance of the selection of the female in reproduction. Maternal influences are of vital importance in the possibilities of male progeny. The benefits derived from the correct observance of the laws that prevail in the results of reproduction are inestimable in the moral and social universe. The mistakes that are manifest in the phenomena of generation are the bane of society and the student of sociology perceives that the law of errors prevail.

That it would have been better that many had not been born is evident, and this question enters into the problems that are of vital interest in our moral, religious and social systems, and the civil and economic affairs of our nationalities. The physiologist and pathologist are studiously and laboriously engaged in the solution of the questions that pertain to our continuation in family lines, and that many families are becoming extinct is certainly established. The lives of men set out in tribes determine the continuation of their histories in the primary causes that enter into their existence and the conditions that surround their development and growth which determines the brevity or longevity of their lives. Morbid irritation of the psychical centers finds relief in evil actions; that is, the organic conformations are such that their tendencies are evil and antagonistic to the welfare of society. The anomalies found in the physical organization of criminals are most interesting, and demonstrate that these abnormalities are characteristic and correspond to the classes of crimes committed. The most careful and scientific observers have examined large numbers of criminals and have classified the ammalous conditions found to exist in criminals, and Lombroso has embodied his observations in that most interesting and instructive book, "*The Female Offender.*"

To those who are interested in the study of the science of generation and its phenomena this work is commended as an invaluable aid in the comprehension of a subject that interests the scientific physician in the prosecution of psychic studies. Theologians and moralists may proclaim their theories and the causes that aid humanity in absolving itself from degradation and misery, yet our hearts are full of compassion for those that seem so cruelly doomed to fate, and our commiserations are made less onerous in the thought that science may yet solve the problem that dooms humanity to conditions in criminal lines. A morbid deviation from an original type which is in its inception transmissable, and increases in its power to impress the unfortunate offspring of degenerates may be modified or corrected by a correction in the lines which have produced it. Degeneracy is evident in physical and psychical characteristics, in deformities, in stunted growths, in want of symmetry, in abnormal proportions of development, in the abnomalities, incoordinate psychic action, in the phenomena anatomical and mental degeneration. Perfection in physical development based upon the highest and best types in races is the exception so much that we seldom observe it in anthropological studies. That scientific studies and observations and the conclusions arrived at must direct the minds of thinking men and women to the subject of generation so that conjugal relations conducive to better results shall not only be considered and put in practical use in the continuation of the races, but shall be an imperative duty of every one contemplating the subject of reproduction in generation. The blots that mar authropological science in its organic forms and their phenomena darken the pages of history and horrify the student of psychological observation and research.

The number of human beings born each day is one hundred and thirty thousand, and the degenerate and anomalous conditions transmitted constitute the phenomena of generation. The survival of the fittest is the great social and economic problem of the age. That crimes are on the increase is established, and theories as to its causation are discussed, but after all generation and the organic causes found in the brain and spinal cord are the primary and only cause of imperfections of degenerates, and the corresponding anomalous characteristics.

It is alleged that overwork superinduces neurasthenia, and this condition of the nervous system tends to the formation of habits that injure health and morals, which is transmissible. Labor is not

deleterious to physical development and moral rectitude, but on the contrary idleness is the great evil in human society that festers and destroys the physical and moral lives of thousands of the rich and opulent. Labor is honorable in all and conducive to the well being of the individual in society and State. Idleness is the great scourge of the nation that is destroying our religious, social and economic material systems. The laboring classes are producing the brain and brawn of our generation that is to bear the burden of the perpetuation of our moral, religious, social and civil institutions is as clearly demonstrated as any problem in human progress. We cannot look to the idle and degenerate of our country for the material that builds the glory and splendor of our religious, moral, social and civil institutions, but on the contrary we elect the industrious, honest, virtuous men and women of our country by birth or adoprion who eteadfastly and industriously continue in the way of truth and patriotism in the generation of our people.

A Report of Some Interesting Sugical Cases Seen During the Past Year,

By Dr. F. T. Meriwether, U. S. Army Retired, Asheville, N. C.

The following reports of cases are a few selected ones from my work of the past year, illustratlng the possible diversity and scope of surgical work which is to be found in every community, and showing the necessity for every town, no matter how small, to have a trained surgeon who is prepared to do surgical work with modern technique, equipped with proper instruments, and educated in the best methods of asepsis and operative work.

Some of my cases have been operated upon in the Hospital here, with the assistance of trained physicians and nurses, while others have been done under the most difficult surroundings, operating in some cases out of doors, some in log cabins, kitchens, and in rooms of all kinds, and under all sorts of disadvantages, and yet union by first intention has been the rule, and the best results possible have been usually obtained. The day has passed when we can all expect to be equally good surgeons, physicians, gynecologists, or even oculists, as our neighbors, and the constant trend of medicine is more or less toward specialism. Not that I think a physician should devote his attention to a specialty immediately upon leaving college, for that is to be deprecated. I think at least ten years of general practice should precede the adoption of special work, and even then one should never lose touch with general medicine.

Case III.—Mrs. E., age 63 years, married, patient of Dr. Watson, but from Morganton, N. C. History obtained from Dr. J. E. Laxton of that place. He saw her first about October 1st, 1895, suffering from an apparent neuralgia which she thought due to her having had some old molar roots extracted from her right upper jaw a few days previous. These teeth had been giving her a great deal of pain for about two months. He prescribed for her, and after a few days, no relief having been obtained, he made a thorough examination of her mouth, Oct. 8th, and found a small tumor the size of a filbert, and from its history, locality and size thought it was an abscess. He punctured it and discovered its probable nature and advised an operation.

She came up to Asheville and entered the Mission Hospital, where I saw her Nov. 21st, 1896. Had a cachectic look, the right side of her face quite swollen, breath very offensive, she was unable to open her mouth, except very slightly. Her pain has been persistent, and lancinating in character, most marked over the antrum of Highmore, and has kept her awake at nights for nearly two months, requiring good size doses of morphia to get any ease. Anorexia marked. No glandular enlargement.

Examination revealed a fungating mass at the site of right upper molars, bleeds easily on pressure, but not very sensitive. Most pain was complained of over the right infra-orbital foramen. Some bulging in right naso-pharynx could be felt, but the jaws could be separated but little, rendering a complete examination impossible. Diagnosed malignant growth probably of antrum.

I operated November 22d, 1896, assisted by Drs. Watson, Cheesebrough and Thrash Chloroform was used as the anesthetic. An incision was made from the middle of the lip to the nose, and then

following the furrow between the cheek and the nose extended to half an inch below the inner angle of the eye, and then at right angles outwards just below the orbit to opposite the spheno-maxillary fissure. Turning this flap back rapidly I sawed through the malar process, leaving all the bone I could, then cut through the floor of the orbit with a scalpel, and then sawing through the nasal process. After having pulled the incisor tooth of that side, an incision was made from the last molar tooth inward to the median line, and then anteriorly to the incisor tooth, and with bone forceps the hard palate was cut through to one side of the septum. In using the bone forceps, one jaw was placed in the nose, the other in the mouth. With strong forceps I twisted the bone, fractured the pterygoid process of the sphenoid and removed it after severing a few muscular fibres, and the superior maxillary nerve.

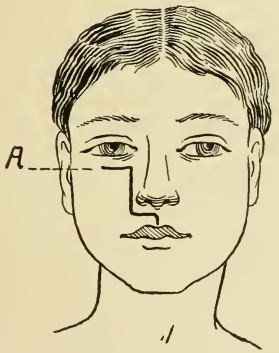

Fig. 1. A line of incision.

The entire spheno-maxillary and zygsmotic fossæ were filled with the growth as was the antrum. When the skin flap was turned back the growth was seen bulging from the infra-orbital foramen. It evidently originated in the superior maxilla, as it was nowhere adherent except to that bone and in the antrum. The posterior and external wall of the antrum was destroyed entirely. The skin flap came together nicely, showing but very little deformity. The patient reacted nicely. The mouth was kept washed out with boracic acid solution used frequently. The sutures were removed upon the seventh day, and union found good. She went home upon the tenth day, and sometime after her return I learned she had a recurrence and died about January 16th, 1896.

A remarkable feature in the case was the complete freedom from pain after the operation, when for the first time in months she slept without the use of morphia. Her appetite became quite good, and I had hopes of having made a cure. The microscopical examination showed the growth to be an osteo-sarcoma. If there had not been an involvement of the mucous membrane of the palate, I should have dissected it up from the alveolar process back to the median line, and externally from the cheek up to its junction with the teeth, and then after removing the bone brought it with the periosteum together, closing the wound in the mouth.

Case VIII.—Mrs. M., age 25 years, married, from Morganton, a patient of Dr. Anderson. Has had two children. Two years ago Dr. Wakefield of Charlotte, N. C., removed a small tumor from left eyelid, which from the patient's statement he thought malignant. It did not recur there, but four months before I saw her the patient had noticed a hard swelling under the left ear. It was quite painful, and sensitive to pressure, the skin was not involved and it was movable. It grew in size rapidly and soon became of a red angry color. It was of a purplish hue, very painful, and there was a good deal of difficulty in swallowing.

I saw her first April 23d, 1896. She then appeared to be a fairly well nourished woman, had a fair appetite and slept well with an eighth grain of morphia at bed time. The tumor on the jaw which is shown in Fig. 2, was nodular, soft in

Fig. 2.

spots, purplish in color, quite sensitive and looked at first glance like a lot of tubercular glands ready to break down. It extended behind the ear and down the neck to the level of the cricoid cartilage. The tumor itself did not seem to be movable, but the overlying skin was slightly so. Just above the right clavicle was a small, hard tumor, freely movable, with the skin red and numerous veins running down its surface. The left forearm was flexed and very painful. She says the elbow joint has been painful for about a month. It is enlarged somewhat and there is fluid present, and altogether it looks like a tubercular joint. Family history good as regards tuberculosis.

I operated upon April 24th, 1896, assisted by Drs. Anderson, Thrash and Brownson. I made an elliptical incision including all the apparently involved skin, dissecting the flaps up well. The lines of incision were brought together below the ear and extended down the neck for 2½ inches. The muscles were well cleaned. One gland below the sternomastoid was found enlarged and was removed, requiring great care as it overlapped the carotid artery and jugular vein. The temporal artery went through the tumor, as did the articularis magnus nerve, and the malar and infra-orbital branches of the facial. The skin flaps came together nicely and were united with silk worm gut sutures. It was by dissecting these flaps up well back that I was enabled to slide them over so large a gap. The temporal was the only artery tied. No drainage was used. The small tumor above the right clavicle was removed with an elliptical incision. It was not adherent to the tissues of the neck, but the skin was firmly adherent. Silk worm gut sutures used here as in the neck. The sutures were removed upon May 5th, and union was found fairly good on the face, a few sutures cutting. Above the clavicle it was perfect.

The morning after the operation the patient had a temperature of 101⅘° F., and developed pneumonia and pleurisy of the left chest. The crisis of the pneumonia was reached upon the 7th day. but there was an effusion in the pleural cavity of 1½ inches, which was finally absorbed. Three weeks after the operation the patient was allowed to go home with the understanding that she was to return to have her arm operated upon.

The photograph shown in Fig. 3 shows

Fig. 3.

the result of the operation. She did not return, and I learn from Dr. Anderson that there was a recurrence in the line of the cicatrix some months later and that the elbow was as large as a fœtal head, and that he had found a tumor on her right thigh and another on the left side over the seventh rib and in the axillary line. The specimen proved to be spindle celled sarcoma, and the clinical diagnosis was multiple sarcoma. I have not been able to get her back for further operation, which I think was clearly indicated, provided she is not in too bad condition, for my experience teaches me that these cases may be operated upon time and again with fair prospects of a cure. Gross, I think it is, reported one case in which he had operated twenty-three times, and finally obtained a cure.

These two cases show the great necessity for early diagnosis and operation in malignant cases.

Case XXVI.—Mrs. D., Hendersonville, N. C., age 36 years, has been married 12 years, III Para, oldest child eleven years old, youngest eighteen months. For the past six years her health has been failing, and she has been treated during that time for ascites, due probably to an obscure liver disease. Sixteen months ago she was tapped and about 3½ gallons of fluid removed, and again about four months later, and then about six months ago, each time getting from four to five gallons of fluid. About the middle of August she was again tapped, getting only

about one gallon of fluid, as it was too thick to run through the canula. The fluid had been noticed to be getting thicker at each tapping.

The patient upon careful questioning says she thinks the swelling commenced low down in the right iliac fossa, before it became general. She had menstruated in May, 1896, the first and only time since the birth of the last child.

I saw her first September 6th, 1896. She was then complaining of great dyspnœa, and of pain under the right scapula. She could not lie down, but would remain propped up in bed. The feet were swollen and the entire abdomen filled with the tumor mass. Dullness on percussion over entire abdomen, no resonance being obtainable in any position. The umbilicus was not distended and pointing as is usual in ascites, but was spread apart and flat. In the right iliac fossa was a solid mass about three inches in diameter, and somewhat nodular and hard. In the right hypochondrium, three inches below the the ribs, was another hard nodular mass about five inches in diameter, while in the left iliac fossa, and three inches above the left anterior superior spine of the ilium, were two other tumors of the same character and about three inches in diameter. These solid masses were freely movable, while over the abdomen fluctuation was marked. The liver dulness extended to the edge of the rib. The examination by the vagina revealed only a partly fixed uterus, there being no bulging in the vault anywhere. Pulse 100, temperature 98⅘°. I gave her strychnine, $\frac{1}{30}$ grains, twice a day, and morphia, gr. $\frac{1}{8}$, at bed time, and advised an operation. Operated upon September 8th 1896, assisted by Drs. Baird and Fletcher, chloroform being used as the anesthetic. Before operating I tapped the cyst and drew off about three gallons of fluid. The operation lasted one hour and ten minutes, quite a little time being lost by trying to stop hemorrhage. After getting into the abdomen, several omental adhesions were found, only one of which required tying, the others peeling off without much hemorrhage. The cyst was seen to be intra-ligamentous, and an attempt was made to split the peritoneum and working around it to shell the tumor out, but it was so very adherent, and the hemorrhage was so profuse, that I feared this process would prolong the operation too much. So I tied down the side of the uterus, across the broad ligament and then up the side of the pelvis, using chain ligatures. The oozing though was very profuse and all attempts to stop it with hot compresses failed. It was useless to attempt to tie anything, so I packed the cavity with plain sterile, not iodoform gauze, after the Mikulicz method, filling in with strips. The left ovary was very much atrophied and was hard. In closing the incision up I used four silk worm gut sutures above the gauze, passing them through and through and tying. Three other silk worm gut sutures were passed through and through, but were left untied. Incision dressed with sterile gauze and cotton. The patient reacted well and was perfectly conscious half an hour after removal to her bed. The estimated weight of the tumor and contents was 40 pounds. Nausea was pronounced, but there was no vomiting. Six hours after operation pulse was 90 and good. No temperature. Urine drawn with a catheter for three days. The temperature rose to 99⅕, eighteen hours after operation, but was normal in thirty-six hours, The gauze was removed forty-eight hours after operation under chloroform. There had been quite a large amount of bloody serum drained by the gauze, staining the dressings through. I had prepared my hands as for an operation, using as I always do the permanganate of potassium and oxalic acid, and it was very fortunate for I had to go with the finger deep down in the pelvis and peel off the adhesions to the gauze. The provisional sutures were then tied and clean sterile drainings applied. Marked nausea followed anesthesia, but no vomiting. No pain complained of except under the right scapula.

Sept. 11th, 1886. Patient has been spitting up a little blood occasionally, Marked pain under the right scapula. Gave her magnesia sulphate in 3i doses for the bowels, but she could not retain it. In vomiting she said something gave way in the abdomen. Bowels moved a little from an enema.

Sept. 12th. Gave calomel, $\frac{1}{5}$ gr., every hour until 13 tablets were taken, when as the bowels had not moved she was given an enema, which produced a large movement.

Sept. 13th. Spitting a little blood and

still complaining of pain under the right scapula. She has taken quite a good deal of nourishment. Has no rise of temperature. Pulse 76.

Sept. 16th. The sutures were removed. A slight suppuration of the two lower stitch holes. Union perfect above. No temperature. The skin over the abdomen was very lax and loose, falling into wrinkles and cavities, impossible to clean perfectly.

Sept. 18th, 1896. Some little pus coming from the stitch holes. A slight separation of the lower, one half inch of the abdominal incision. After eating some stewed fruit her bowels moved twelve or fifteen times, the stools being solid in character and causing great pain. This was probably the first time the patient's bowels had been cleaned out. Tongue clean; the patient sits up in bed and feels quite strong and comfortable.

Upon Sept. 20th, 1896, the patient's temperature went to 100⅕; pulse 80. Slight suppuration from the lower end of incision, probably about a drachm of bloody pus since last dressing two days before. Pain complained of in left leg. Upon examination found a commencing phlebitis, leg quite swollen and sensitive, and the femoral vein could be outlined perfectly in a hard cord. I found just above the left knee an abscess which the patient said had been caused by a hypo dermic injection several weeks before, but which had apparently gotten well. I attributed the phebitis to it. The temperature stayed up for a week and finally dropped to normal. The leg caused her some trouble for about three weeks, but at that time she could use it fairly well. The abdominal incision healed over nicely, it never was in fact anything but a sltght superficial suppuration, infection no doubt being due to the great difficulty in keeping the folds and wrinkles of the skin clean. The patient was discharged upon October 18th. The tumor was sent to the Army Medical Museum, and through their kindness I am enabled to report the following:

Gross appearance, large cyst with a tough fibrous wall, covered on the outer surface with a layer of peritoneum and on its inner surface with a smooth velvety membrane. Numerous masses, varying in size from that of two fists to a walnut, project from the wall of the cyst into its cavity. The wall also shows still smaller cystic sacs containing clear fluid upon its inner surface. The larger masses are tense, fluctuating and lobulated from constricting bands of fibrous tissue which bind them down. Incision into the larger masses from the outer surface through the sac wall shows a loose meshed fibrous stroma, in the spaces of which is a semi-transparent mucilaginous fluid, which flows freely, and a yellowish myxoid material that is not easily removed. The microscopical examination shows dense bands of fibrous stroma, in places rich in cells, which radiate in various directions, enclosing numerous acini. These are lined with a high columnar epithelium, the cells of which are nearly everywhere distended with a clear mucoid material. Numerous papilliferous projections spring from the walls of the acini, and by branching serve to fillI more or less completely the latter. In addition, in some acini, there are to be seen desquamated and necrotic epithelial cells, mixed with a homogeneous albuminous material.

I think the tumor may be designated as a palpilliferous cyst, adenomia of the ovary.

(Signed) WALTER REED,
Surgeon U. S. A.

Case XXXI.—The following case is of some interest as to the value of Kelly's method of ventro-fixation. History, age 26 years, uumarried, had a child when 13 years of age. Commenced menstruating at twelve. Six years ago had noticed the uterus protruding from vagina. It slowly descended lower, but with pessaries and supports, and various forms of local treatment, she was kept fairly comfortable. During the fall of 1895, a ventro-fixation was done by an excellent gynecologist of this city, but after six months the uterus reappeared at the vulva. When I saw her there was a protrusion of two inches, which conld easily be replaced. The cervix was only slightly elongated, and there was no erosion. There was a lacerated perineum with a rectocele and cystocele. Some little pain complained of during menstruation, but the prolapsus did not worry the patient as long as she kept quiet. When the uterus was down, the finger passed into the vagina by its side could detect the broad ligaments and utero-sacral ligaments relaxed and drawn downwards like

a cord. The uterus was only slightly enlarged and was freely movable.

I operated September 26th, 1896, assisted by Drs. Reynolds, Baird and Minor. Drs. Brownson, Van Horn and Morris being also present. An incision was made one-half an inch to the right of the cicatrix of the previous operation, going through the muscle. The results of the previous operation was shown by two delicate, thin, cord like bands, extending from the fundus uteri to the old incision. One of the bands was round and about an eighth of an inch in diameter, the other was flat, about one-half an inch broad and hardly a sixteenth in thickness. Apparently they consisted entirely of peritoneum. I used two silk worm gut sutures and took a deep bite in the muscles of the uterus, bringing the needle out about an inch from its insertion and passing them an inch on either side of the incision, including in the suture the fascia and a portion of the muscle. Closed the abdomen with silk worm gut. Sutures were removed on the tenth day with union perfect.

Upon October 8th, 1896, I did an operation on the cystocele, and a modified Emmett on the posterior wall. The woman thus far has been doing heavy work with no discomfort, and with no signs of a recurrence of the prolapsus. It was evident that the previous suspension sutures only included the peritoneum of the uterus, and only a small part of the abdominal peritoneum being passed too near the line of incision, and the ligaments being so very relaxed, with no support below, they were unable to support the uterus and the periteneum, simply pulled out into these cords.

Case XXVII.—The next case is one in which I was called by Dr. H. L. Baird of this city. Its unique features is that of gangrene following typhoid fever, which is only rarely seen. The medical history of this case is reported by Dr. Baird. I saw patient first on August 8th, 1896. M. P., age 21 years, had been feeling badly for about a week, back, head and limbs aching, tongue badly coated, bad taste in mouth, no appetite, temperatnre 103.5°, pulse 110; bowels constipated, no tympany. Treatment, calomel to move bowels, Bartholow mixture three drops every four hours, cold sponge baths every three hours, and milk diet.

This treatment was continued for two weeks, during which time the temperature ranged from 102.5° to 104.5°, pulse from 96 to 110. At the beginniug of the third week whiskey was added to the treatment. Temperature declined gradually until the 21st day, when it reached the normal. The patient was then very weak, pulse 120 and poor in quality, no appetite. Strychnine sulphate given, grs. $\frac{1}{60}$, four times a day, and whiskey ordered to be given freely. The patient did not get the whiskey in proper doses, as the nurse was quite ignorant. Saw patient three days later, and found her with normal temperature, pulse 120, appetite still poor. Restless at night and complained of cold feet. Feet were examined and found to be very cold, especially the left one, in which the cold extended half way up to the knee. Nothing else unusual observed. Blankets and hot irons were ordered to the feet and legs; whiskey and strychnia continued; five grains of Dover's powder given to relieve the restlessness at night, and the patient's husband directed to let me know if she did not do well.

Heard nothing for three days, when I called and found the patient very restless, had had no whiskey since my last call. Complained a great deal of left foot and leg being cold and of some pain in leg. Has been feeling chilly for some hours. Temperature 103.5°, pulse 130; marked evidence of gangrene about toes; skin withered on the leg half way to knee. Quinine, iron, whiskey and milk ordered to be given freely; strychnia continued. On the next day, which was the 29th since the patient took to her bed. Dr. Meriwether was asked to see patient and give his opinion as to amputatlon.

I saw patient first upon September 5th, 1896. She was very anemic, weak, pulse 135 and quite weak mind perfectly clear and rational; temperature 102$\frac{1}{5}$°; quite a bad bedsore over sacrum, about four inches in diameter; several sloughs had separated; left leg gangrenous, line of demarcation well formed posteriorly three inches below popliteal space, anteriorly it was about 1½ inch higher. No pulsation could be felt in the popliteal artery. Pain complained of on pressure on calf of leg. She was evidently septic, and an amputation was plainly indicated, still her condition was such that I hesitated about doing an operation. I advised pushing

the whiskey and strychnia, hoping to get her in shape so she could stand the shock of an operation. I amputation the thigh at the junction of the middle with the lower third, about 70 hours later, assisted by Drs. Baird, Morris and Brownson. Patient took anesthetic very well, requiring a very small amount. Very little bleeding, the patient seeming not to have much blood. The arteries and veins in the stump were clear of all thrombi. Silk worm gut used as sutures.

The operation was done as rapidly as possible and no time was lost. Owing to the somewhat unsanitary condition of the house in which this patient lived, I had a table placed out of doors and did the operation in the open air. Patient rallied nicely from operation, had a good pulse for several hours, but finally sank and died from exhaustion about 14 hours after operation.

Upon examination of the leg I found the popliteal artery blocked by a thrombus extending upward to where the external and internal articular branches are given off. There the thrombus was solid, but as you followed it downward it became softer and purulent, and at the bifurcation into the posterior tibial and peroneal posteriorly was a cavity containing about three ounces of sanious pus. Evidently an infective embolus had lodged in this bifurcation, producing the gangrene from stoppage of the circulation, and also being the focus of the suppuration. The interesting question is, did that embolus come from a thrombosis at the site of the bedsore and containing only the ordinary suppurative bacteria, say the staphlococcus or streptococcus, or did it come from one of Peyer's patches, and contain the Eberth bacillus. I had no means of making cultures to determine what the prevailing organism was in the pus.

The next case is one of interest as to its probable prognosis:

Case XXI.—A., age 12 years, male patient of Dr. Burgin, of Biltmore, N. C. First seen August 20th, 1896. History. Last fall, during October or November, 1895, he was struck by a ball upon the back of the left leg. This caused quite a contusion which apparently got well, but a month or so afterwards a small, hard, but not very painful swelling appeared at the lower part of the popliteal space. The tumor soon became the size of a base ball, but still was not sensitive to pressure and but little pain was complained of. Patient says it felt sore and the function of the knee was interfered with. He soon commenced to lose his appetite and emaciation became quite marked. He did not sleep well and felt tired all the time. Patient was treated by several physicians, but I understand a diagnosis was not reached. When I saw him he was very emaciated, though he had a fair pulse, complained of more pain in tumor, which extended from the knee to within three inches of the ankle. The foot was œdematous, but at no part of the leg was there any tenderness. The tumor, which was 10 inches in diameter at its largest part, was hard, in some places, as hard as bone, with several soft spots in various parts of its surface, varying from the size of a dime to that of a dollar. The drawing shows quite well its fusiform appearance.

Fig. 4. Subperiosteal Sarcoma.

I diagnosed sarcoma and advised an amputation as soon as possible. Upon August 22d, 1896, I amputated the thigh at the junction of its middle and upper third, with the assistance of Drs. Baird and Burgin. Chloroform was used as the anesthetic, only three drachms being used, In this case also I preferred out of doors to the house as an operating room. So we moved the table out under a little tree. Operation lasted 45 minutes, as I only had one assistant. Silk worm gut used for sutures, silk for ligatures.

The circular operation was done. I

used two rows of sutures, the first picking up the ends of the muscles, the second being skin sutures. The patient reacted well, never required morphia, had no nausea or any feeling of discomfort, at any time after the operation. Sutures removed on eighth day, and union was found perfect except one small skin suppuration, which healed in a few days. The patient now is fat and is going to school. Of course the prognosis must remain in abeyance, for not until the three year limit is passed can we say our patient is cured. This case should prompt us to make an accurate diagnosis early in malignant tumors, for if this operation had been done four months sooner no doubt his chances for cure would be materially increased.

The tumor when examined showed cancellous bone to its periphery, with numerous small cysts, some containing blood, some a yellowish albuminous fluid, and others a brain like substance, composed of spindle cells. Numerous large, dilated veins and arterioles were scattered throughout the mass. Apparently the sarcoma commenced in the tibia, but it had surrounded and apparently absorbed the fibula for about six inches.

The Relief of Pain.

By STANLEY M. WARD, M. D., Hampton, N. H.

I can conceive of nother more trying to the physician than a patient in severe pain, to whom opium and its preparations are obnoxious and attended with results dreaded by the sufferer more than the complaint.

Mrs. P. has been an invalid for the greater part of the sixty years of her life, from cancer of the womb. Being peculiarly susceptible to the action of drugs, physicians have repeatedly sought to deceive her when in pain, by administering morphine, Tully's powder, opium, deodorized tincture, etc., thinking her aversion to them a mere fancy. But she was never deceived; headache, nausea, drowsiness, always followed, and now she absolutely refuses to take opium in any form.

September 6th, was summoned to relieve an acute exacerbation of the cancerous complaint, brought on I judged by uterine contractions, at least such was my diagnosis from the 'rhythmic ebb and flow" of the pains. Hot applications, anodynes (barring opiates), antipyrine, and phenacetine, the latter mixed with a little Tully's powder, gave no relief. Finally I began to prepare my hypodermic syringe, assuring the patient that by using atropine with the morphia, the bad results of the opiate would be mitigated. She begged me to desist, declaring that the coming days would be so horrible that she preferred to suffer on. At my wits' end (for I dared not administer chloroform) I gave her fifteen drops of Parke, Davis & Co.'s Chloranodyne, repeating the dose in a half hour. The pain was very much reduced. In another quarter-hour I gave her ten drops more (forty drops in all) and found myself master of the situation.

Calling in the evening, I found my patient sleeping. She had taken fifteen drops of the Chlor-anodyne about four o'clock, and was soon afterward entirely free from pain. The next day she sat up, and I found her as "bright as a button." She insisted on keeping the little of the Chlor-anodyne I had left, saying that heretofore she had suffered from both attack and medicine—henceforth she proposed to conquor the pain, knowing that at its cessation a calm sleep and clear head would be hers, in place of the misery resulting when, frenzied with pain, she had resorted to morphine.

Germs in the Vagina.

According to the well-known obstetrician and gynæcologist, Dr. Lusk, many of the germs found in the vagina have no action upon this tissues. The fact "that micro-organisms are present in great variety" in the vagnia does not endanger the parturient women. The bacteria that possess pathological significance are mostly anærobic. They do not enter the circulation or thrive in the blood, neither are they absorbed through the vaginal walls. They may be the source of fœtid odours, which reflect upon the cleanliness of the patient. Doederlein has discovered a bacillus which intensifies the acid reaction of the vaginal secretion, and renders it unfavourable to the multiplication of the streptococcus.

Animal Tuberculosis.*

Out of 9,482 deaths from all causes in Columbus, 1,420 died of consumption, from diphtheria 421, scarlet fever 74, typhoid fever 349; or only a little more than one-half of the mortality was caused by these three dreaded diseases—that was due to consumption. The three acute infectious diseases are required to be reported, while consumption, which is infectious and more deadly, is neglected. Nor do the deaths from consumption represent the entire mortality due to tuberculosis.

Tuberculosis has but one cause, and that is the bacillus tuberculosus.

Nor is tuberculosis confined to the human family. It affects cattle, hogs, and fowls. These animals furnish a very large proportion of our food, and it is a startling fact that where the products of bovine herds are most used there tuberculosis commits its greatest ravages upon mankind. Tuberculosis is increasing among animals even to a greater extent than among man.

Statistics from abattoirs in Germany show that among 51,427 slaughtered animals, 0.6 under six weeks of age were infected; 0.6 from six weeks to one year; 11.4 from one to three years of age; 33.11 from three to six years of age; 43.4 *over six years of age.*

Abattoir statistics from Berlin: Before 1892 there were 12 per cent. infected; in 1892–93, 15 per cent. infected; in Saxony, in 1893, 18 per cent. infected.

In Leipsig, from 1888 to 1894, the number of cows infected rose from 17.5 to 31.1 per cent.

In Schwerin, the number of infected cows rose from 12.83 per cent., in 1886, to 37.60 in 1894; and the number of infected bulls, oxen, and calves increased in an equal ratio.

In the State of Massachusetts, where there is a systematic effort being made to stamp out tuberculosis among cattle, the condition of affairs is not less alarming on the farms. Of twenty-two herds, aggregating 779 animals, 317, or 40.6 per cent., were found infected. One fine herd of five, which supplied milk for children alone, furnished five infected animals. In another instance, a herd of selected animals kept in the best possible environment, 64 animals showed 60 infectious, and these animals furnished milk for food. Nor are cows alone affected, for hogs and fowls are also subject to tuberculosis.

The flesh of the tuberculized animals may, and does, contain the tubercular bacillus; and it has been found that meat grilled at a heat which showed 70° C. at its center furnished material for successful cultures of bacillus tuberculosis. Yet this heat is sufficient to cook meat sufficiently to be eaten.

The physical condition of the animals does not give indications sufficient for diagnosis. They maintain flesh, continue to feed well, and give a good quantity of milk when tubercular lesions are far advanced. Cattle have been slaughtered for beef, and have been and now are being used for food, whose lungs show grave ravages of the disease.

Tuberculin injections are an infallible test, and at the same time free from objections. As the State of Massachusetts is meeting this disease all other States must if they are ever free from this scourge which not only kills the herd but likewise the owner.

The State has been divided into districts, and a systematic test of all animals in the State is now being made. The stables in which the infected cattle have been kept are thoroughly renovated, and mercuric chlorid and carbolic acid in solution are used to saturate the mangers, floors, stalls, etc., and the woodwork is washed. By keeping all infected cattle out of the State, killing all infected cattle in the State, and by vigorous hygienic measures, the Cattle Commission expects to banish bovine tuberculosis from the State, and I believe they will succeed; and then I feel sure we shall hear, in the years to come, that the number of cases of tuberculosis among men have become greatly diminished. And then measures will be taken to eradicate this scourge finally from among men.

There is no disease, whose secret of power we know, but we have successfully met and vanquished. The same can be done with tuberculosis, not in my day, perhaps, but those are living who will see tuberculosis under control, and no more the reproach of medicine.

*Abstract of a paper read before the Academy of Medicine of Columbus, Ohio, Nov. 11th, 1896, by D. N. Kinsman, M. D.

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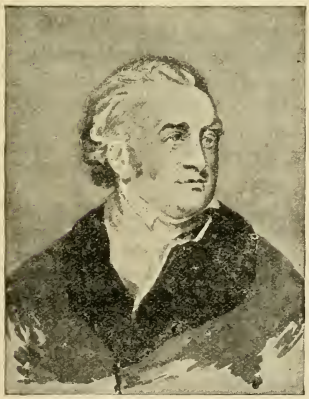

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THE

Charlotte Medical Journal.

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NEW YEAR RESOLUTIONS.

At this season of the year it is customary with a majority of persons, in all walks of life, to "turn over a new leaf." Excellent resolutions for the future are enthusiastically made and new lines of action for the better conduct of life are mapped out. It is probable that the good resolutions of January are often forgotten or broken before June. Nevertheless it is commendable to form such resolutions, and it may be said of those who turn over the new leaves that it is very meet and right to do so.

Just now in the beginning of the year it may be well for physicians to take an accounting of stock, and with an eye to our mistakes in the past, and with the brilliant light from the lamp of experience shining full in our faces to resolve upon such action for the future as will be likely to make our professional career a more eminent success.

If we are young physicians it may be well for us to resolve that for the coming year we will make no attempt to use in our practice all the mixtures and combinations of drugs so freely offered us by generous manufacturers, nor even to use all the drugs of the Pharmacopæa, but rather to study more thoroughly and endeavor to use more intelligently the smaller number of those tried and true remedies upon which we have the fullest assurance we may depend.

If we are older physicians we may with benefit to ourselves resolve that we will still continue to be students, not being content with past knowledge and acquirements and not forgetting that medicine is a progressive science.

If we are young or old we may resolve for the New Year to cultivate a broad spirit of Christian charity, to the end that our intercourse with our fellow men may be free from those animosities and hostilities of a personal nature which have in the past given us so many bitter and unpleasant hours. Let us resolve to meet with polite and courteous treatment, and even with friendliness, that patron for whom we have worked so faithfully and so successfully, getting up often in the night for his benefit, but who has finally decided to employ the physician who has just joined his church, or to "try a doctor of the other school." Let us resolve to turn the other cheek also when our brother physician and neighbor in our absence removes the bandage from our case of sprained ankle, asserting that our treatment was wrong and that skunk's oil should have been applied to the afflicted member instead of the camphorated oil which we had prescribed. In short let us resolve to rise above the petty affairs of professional life as becomes dignified members of a most honorable profession.

Let us resolve for the New Year that we will undertake more accurate business methods, making prompt collections and living within our income, in order that no stain upon our reputation as business men may militate against our professional success. Let us resolve to so live, not only that the world may be the better for our having lived in it, but that the noble profession of medicine may be all the more noble by reason of our earnest, honest, manly, Christian labors in that profession.

Finally let us resolve to care for our own healths, obtaining as far as possible regular hours for meals and sleep, cutting off extra work all that we can, and setting by a few weeks of the year for rest and recreation, in the effort that we may possess sound minds in sound bodies. No sick and suffering person desires a physician who is a semi-invalid, but rather one who with ruddy cheek and sparkling eye, will bring with his daily visit a glimpse of the health which he covets. There is nothing, indeed, of more importance to the physician than the preservation of his own health.

May the New Year bring us happiness,
May the New Year bring us wealth;
But, richest blessing far of all,
May the New Year bring us health.

CHARLOTTE WATER SUPPLY.

We note from the daily press that the question of a water supply for Charlotte has been finally disposed of by the authorities purchasing the plant in use from the Water Company. A new and additional source of supply to the reservoirs has been made by pumping connections with Brier Creek, a stream east of the city limits. From what we can learn there is sufficient pure and wholesome water furnished by this stream for the present and future uses of the city's population.

We furthermore have learned that in the report of the experts employed to examine into the quality and quantity of the water supply they advised the disuse of Sugar creek entirely, as the water from this stream was not sufficiently protected against surface water and pollution from other causes. The possibility of these being obviated by placing the intakes higher up the stream was also mentioned.

We are gratified to note the general interest manifested by the public in the question of pure water. No community can exercise too much care in selecting a proper source for water. We believe furthermore that the period has arrived in our city for the abandonment of a number of the wells now in use. Within the present fire-limits all wells should be condemned and filled with dirt. It is useless to pass an ordinance prohibiting the use of the water from these wells. The people will not concern themselves, and the measure should be a strictly prohibitory one as described. Every well in the territory mentioned is contaminated by seapage of sewage. The net work of drains underlying these blocks of buildings are numerous and many are in bad repair which must necessarily keep the earth soaked with fæcal matters. To close up the wells supplied by water from these soures will stop a great deal of sickness of an avoidable nature.

MEDICINE AND SCIENCE.

In the evolution of medicine, now so astonishing the world by its rapid developments, many problems are constantly confronting investigators which are hard to solve.

This is necessary, probably, in the nature of the subject involved, and tends to show that nothing is brought to light all at once, full and complete; that everything in nature, whose laws are as a unit, whether appearing to us simple or complicated, is opened to us little by little, part by part, and in correspondence to the degree of labor or study devoted to it.

This is the case with all comparative or scientific studies, but bears particularly on medicine, because of its yet relative uncertainty; its want of exactness either as a science or an art.

Many problems, however, that were in days gone by supposed to be unsolvable, have been solved, and there are many that now seem dark and obscure, which will, certainly, in the course of time be brought to light and their definition be as complete as any that have already been manifested as the reward of labor and thought.

The evolutions in the field of bacteriology have been truly wonderful. The developments made in that domain in the last decade far surpass any achievements in all the previous history of medicine, so much so that we can now proceed with reasonable confidence upon the data, and assurances given us, and feel that we have a reliable key to the heretofore intricate subjects of the relationship of bacteria and contagium, and contagious diseases.

But while it is conceded that there are pathogenic bacteria, and that they stand in causual relation to infectious diseases, there are other questions to be answered which involve the whole pith of the subject. It is not sufficient to discover bateria-bacilli, cocci in diseased proprocesses, and isolate and name them, but investigation should be directed to the discovery of their origin, their habitat; whether in the air, water, soil or in the lower animals, and destroyed before they begin their infectious rounds; and until this is accomplished medicine can hardly be said to have advanced many steps towards that period when it may be called more of a science and less of an art.

CONFIDENCE IN MEDICINE.

It is common enough for persons to advise the growing shoot to be plucky, to make an object point of steadfast endeavor. The earnest parents, feeling

their own shortcomings betimes, are yet zealous for their progeny to pass onward and upward toward the goal just out of grasp, and perhaps lost through want of confidence. This inherent desire for the *best* is a prominent attribute of the human race, no matter how few or many of the cherished anticipations become realities in the end. Those that do reach success in any walk of life must have had *grit*. No word so well expresees this desideratum for mounting to eminence. Nor does it belie those other essentials of activity, modesty, kindness and learning, paramount for the fullest life in any sphere.

In medicine it seems to us there are too many who lack that characteristic of personality, who need confidence in action, and who are, as it were, "leaners on" to the profession or upon their colleagues; those who are always in doubt about what to do, advise or prescribe in a given case. Pre-supposing, of course, a thorough groundwork in physiology, anatomy (and what special training a man may possess), the physician is then prepared to prescribe unhesitatingly. So that timidity in therapeutics should only be the state of the beginner, not of he who is at all observant of the action of his remedies for even a short experience away from the *alma mater*.

Great diffidence in giving a prognosis, too, should be studiously avoided. Close observation will make the "expectation of life" in serious maladies better known to us; but if not so, do not hesitate to say it is a dangerous condition for the patient; that the family must be prepared for a fatal issue. This course will foster mutual confidence. By such a course, too, an anxious family is not left in utter despair. Then also doubt about your answers in slighter ailments is obliterated.

This is a difficult problem. While we must make many mistakes during a lifetime of practice of medicine, yet one mistake should more frequently give confidence than it does. It should stir up the senses to keener appreciation of our responsibilities, making us more determined to bring out the "I know," rather than the too frequent "I doubt" what to do under similar circumstances. Many men fail right here. They are too easy of medical defeat, yet, perhaps, have good learning from the text book standpoint. Theoretrical knowledge comes first we admit, but it must go with practicability. Each one can cultivate it. Add tact and you will do most for your patient.

General practice affords the widest field here. Do we appreciate enough the opportunity? Are we constantly pushing on for the good of the patient and the community at large? Are we at every turn of a critical illness watching, cultivating the clinical soil at the bedside to in future be more positive in our answers and of greater service, therefore, to the next sufferer? Or do we become depressed and unfit for observation during such emergencies, because the patient may die? Or is the field overgrowing with the weeds of carelessness, choking timely hours for clinical observation? Each case studied well, no matter what the issue, should give renewed assurance. None can prescribe an "elixir of life." People will die. No man should lose confidence in his art. We are addressing beginners.

The writer has been prompted to this subject by several incidents of non-success in bright young men. One of them had had an excellent hospital training; was clever but sensitive. Left in charge of a large practice, a half dozen elderly folk died within the fortnight. They had been well treated. This young physician has since taken a position as resident of a penitentiary. Had the mortality been the incentive to win, a differeut result would certainly have followed, for his ideal was private practice.

Putting to the best service one's energies; to this add determination, then each one will finally dispel the element of unnecessary wrong; make the difficult and most useful profession a pleasure, in which one must have confidence.

PRACTICE OF MEDICINE FROM A BUSINESS STANDPOINT.

The physician in his magnanimity does more for suffering humanity by way of charity and charitable deeds, than any other class in any business or profession, and he of all others is the most greatly imposed upon and neglected, so far as remuneration is concerned, which, as a rule, is an after consideration. What is

worth more, or so much, in the house of peril to the suffering one, than the timely advice of the physician if followed, or a few drops perhaps of a single drug administered by the skillful practitioner, relieving suffering, bridging as it were, tiding over the chasm, until the patient is again restored to health, so that he is able to follow his usual pursuit. How many sacred promises have we received from such a patient, or his friend, to be forgotten as soon as the sick party was out of bed? The one problem important alike to us all today is, how can this best be remedied? What plan can we follow that we may receive a fair, reasonable, compensation for what we do?

Is not the physician entitled to remuneration the same as any other man in any calling, business, or profession? admitting that it should be so, but invariably the rule is forgotten when the shekels are passed round. In a measure, and to a certain extent, physicians themselves are to blame for educating and training up the people to this kind of a regimen, the only way to make amends for this existing state of affairs, is to conduct the business part of the practice of medicine in a business way, and on business methods. But one writer says "the majority of physicians have not had any, or scarcely little training in business methods."

It is believed the following plan is the most successful, and when begun should be carried out: As soon as a case has been dismissed from our care, the last call has been made, present the account, have an understanding as to the amount due for attendance. This plan saves trouble, delay and annoyance in several respects, there could be no denying the number of visits made, it is more easily presented then than any other time, and it is the proper time to consider the adjustment for honest service rendered, and not infrequently for money paid out for medicines, appliances, etc., necessary in the treatment of the case. If promise is made to meet the same at a certain time, make a note of it, or better, take a note of hand due at the date promised. If the physician is too over-crowded with practice, it is not a hard matter to find a collector in any community who will look after the collection for a small per cent. with care. When his notice is received, and the party comes to the physician with it, send him to the collector, telling him any arrangement he can make will be satisfactory. The collector will see to it, as it is his business to do so; that your time is occupied; that you looked after the matter once without success and it became necessary to place it in the hands of one who made a business of collecting.

The physician who adopts the above plan, which is simply just and right, will have been successful in collecting a large per cent. of the accounts that are now upon the pages of the ledger outlawed, that could have been collected at the time by following the method of doing business in a business way, just the same as every one does with us when we are placed on the debtor side. Such a course followed up systematically will secure a competence, will bring to the physician who follows it in time the best clients, the best patronage. If any one should take an offense at the doctor for presenting his bill, and insisting on its adjustment, the sooner done with such a person the better, if not appreciated sufficient to merit compensation.

PROFESSORS AND RELIGIOUS QUESTIONS.

We note from the public press that the faculty of the Georgia Medical College, of Augusta, Ga., have taken steps to prohibit their associates from discussing religious questions in connection with their lectures to the students.

In a recent address by Prof. Eve on the subject of the evolution of medicine, he did not confine his remarks to medicine alone, but branched out and touched upon evolution in general and theology in particular. His statements elicited protests from some, and the newspapers have taken up the discussion.

We understand that the matter is to have a rehearing before the faculty and the rights of the professors in discussing a subject in all its bearings is to be defined. This is the first occasion in this country of a matter of this kind. The issues at stake are many and vital. In general it may be affirmed that the purpose of a medical lecture is not to inculcate theological opinions, however important they may be to the student's welfare, here or hereafter.

ENTERO-COLITIS.

As its name implies, entero-colitis is an inflammation of the small intestines (the ilium) and colon. In some cases there may be simply a catarrhal condition; in others an inflammatory condition, with perhaps ulceration of the mucous coat, and less frequently, extensive sloughing of the deeper coating of the intestinal walls. The treatment is antiseptic, beginning with the mild chloride, which has a decided alterative action and cell function, as well as antiseptic. It is well to precede other antiseptics, by washing out the stomach, either with the tube or by the administration of large quantities of warm water, rendered mildly alkaline with soda chloride, which will usually produce emesis.

The antiseptics may be supplemented by flushing of the colon every four to six hours, either with pure boiled water, or better, with some anodyne and astringent, as opium and Tannin, the beneficial effect of which is very gratifying, as it is readily seen and appreciated by the laity. The feeding of this class of patients is a matter to be very carefuliy considered. The relatives and *kind* and motherly old ladies, with their tenderest sympathies, will insist that the dear baby *must* be fed, or it will starve to death; when oftentimes, in the beginning of the attack, it would be better for the child to abstain from food entirely for twenty-four or even forty-eight hours. That you may clear the alimentary canal of microbes and fermented materials, instead of feeding them, and thereby furnishing them pabula, to propagate and feast upon, and produce the fermented products and Toxines in abundance, to be absorbed into the system; thereby interfering with anabolistic cell functions and elimination cell action, and thus allow an accumulation of poisons in the blood, with their deleterious effects.

When the intestines have been properly emptied, then food, in proper quantities and qualities are to be administered. Milk, or milk Pasteurized, if agreeable to the stomach, is the very best of food in such cases, though there are some cases that cannot bear milk in any form. It is the article of diet that is most likely to disagree, and respond to fermentative action, and when it does, white of egg broths and artificial foods should be substituted for it.

All symptoms should be met as they arise, and all concurrent maladies remedied. Antiferments and digestives are useful, as are also tonics and alteratives in convalescence.

WHAT IS EMPIRICISM?

Experience is the ground-work of empiricism, and it has always been said that experience is the best teacher. And whatever knowledge comes to us from that experience, and whatever results proceed from that knowledge, whether by contact, association or observation, may be termed empiric knowledge or empiric results. And yet empiricism is more than experience.

We are much inclined to judge by results, no matter how these results are brought about. We administer a remedy that has long been known by experience to effect certain ends—opium for instance, to produce sleep or allay pain. We may not know precisely how this remedy acts—whether first through the spinal cord, then the medulla, then the nerves at the base of the brain, or the reverse; or whether by absorbtion through the fluids, or by direct nerve transmission. But we know its physiological action is always the same, and always produces the same results; and from this—only accumulated experience—we feel safe in repeating it—nothing more or less than experiment—time and time again.

Why may not this trial of substances on the human subject or on animals be a kin or have relation to any other experiment—say in chemistry, in detecting iodine by starch solution, or iron by tannin, or liberating carbonic acid gas from a carbonate by acids. This knowledge, too, comes to us by experience.

Empiricism, then, as applied to medicine, can only be a relative term, for though there may be certain definite laws for our guidance, which cannot be contravened, these laws are not always applicable on every case and without exception, and it is not possible for the human mind to grasp their whole meaning. We guage our knowledge of air and steam by their volume, their power

of expansion and contraction, but who can appreciate or estimate their full atomic or molecular power or force?

CHRONIC CERVICAL ENDOMETRITIS.

Chronic inflammation of the mucous membrane extending from the Os internum to the os externum. Of the multitudinous diseases of the female genital system this is probably the most frequent, not in itself a disease dangerous in character, but proves the starting point for some of the most serious and stubborn of uterine disorders, exposed as the cervix is to injury, laceration from parturition, irritation from walking, riding and lifting, it is not surprising that its complicated investment should become the seat of frequent disease. The affection is a source of menstrual disorders, and not uncommonly produces sterility Some authors have given to this disease the names of cervical catarrh, cervical Luecorrhœa and endo cervicitis. Considered from a pathological point of view, it consists in inflammation, especially of the mucous glands, consisting chiefly in glandular inflammation. The mucous which is secreted in large amounts as one of its symptoms is the characteristic discharge of these structures. The villi, especially those on the vaginal face of the cervix, become diseased. A loss of the normal supply of epithelium, which produces a superficial abrasion. This becomes in time more distinct and marked, from destruction of the villi themselves over considerable space. Should this process of destruction go on and effect the deeper tissues a true ulcer would be formed and no one would have denied the name of ulceration to the existing condition, but usually this is not its progress. In time an hypertrophy occurs in the villi which increase in size and project from the surface and give to the os and cervix an appearance which has caused the term of glandular disintegration to be applied to it. This state affects the vaginal portion of the cervix chiefly. But another pathological state which is met with occassionally as a complication of cervical endometritis, is an everson of the os and the lower portion of the canal to an extent sufficient to keep up an inflammation by friction of the membrane thus exposed against the floor of the pelvis. Obstinate cases are met with sometimes due to this condition. As a rule before the disease has existed very long the constitution of the patient becomes implicated. She will become nervous, irritable and hysterical, appetite and digestion feeble, impoverished blood, resulting from impaired nutrition; complications develop; cystitis, hyperplasia and vaginitis. The duration of this disease depends upon circumstances which control its progress. A guarded opinion should be given regarding the time in which a patient will be restored to health, as it might pass into a long chain of uterine ailments that make the lives of women so burdensome.

Treatment consists in emolient or alterative applications, destruction of diseased glands and general regimen; rest, outdoor exercise, sexual abstinence, tonics and alteratives to keep the bowels well regulated; better if it can be done by massage; dietetic and hygienic measures; a long visit, a journey away from home and the cares, anxieties and perplexities of household duties.

TREATMENT OF ATROPHIC NASAL CATARRH BY VIBRATORY MASSAGE.

The etiology of atrophic nasal catarrh is about as little understood as its treatment is unsatisfactory.

Various views have been advanced regarding the characters of this malady. It is claimed by some that its lesions are entirely local, concomitant, with ordinary forms of nasal catarrh; while others maintain that it is due to constututional causes such as syphilis, scrofula, and various kinds of dyscrasias. Though the consensus of opinion these days regard the latter view the more plausable, it cannot be denied that there are cases where constitutional anomalies cannot be detected. It follows, therefore, that in the light of our present knowledge of the disease, there is still much left to be desired.

As regards the treatment of this disease two fundamental principles are essential in order to successfully carry out our therapeutical efforts:

1. The indicatio causalis; 2. the indicatio symptomatica.

To satisfy the former it is necessary to look out for constitutional anomalies, and if found direct our treatment accordingly. The importance of constitutional treatment is readily conceived when we consider that in cases where the mucous membrane is still partly intact, the improvement in the physical condition, the richer condition of the blood, etc., will exert a beneficial influence upon diseased tissues and stimulate them anew.

The indicatio symptomatica must be divided into two portions, viz,. the removal of the accumulation of secretion, and the disinfecting of the nasal cavities, and the stimulation of the mucous membrane with a view to the regeneration of the serous glands.

To accomplish this the nasal cavities should be irrigated thoroughly with an alkaline solution from the nasal douche; if after a thorough irrigation any plugs or crusts remain they should be removed with a pair of forceps, or with the instrument made specially for this purpose, called "kornzauge." Then with a little cotton on the end of a probe, impregnated with some mild disinfecting fluid, wipe out the whole nasal cavity. This must be done cautiously, without rubbing, to avoid bleeding or injury to the mucous membrane. After the nose has been made dry the next thing in order should be the vibratory massage of the mucous membrane. Where the atrophying process is not too far advanced, we believe vibratory massage is the only rational mode of treatment.

The method of most effectively performing vibratory massage is to take a small cotton tampon, saturated with a disinfecting and at the same time stimulating solution, and for the purpose the following solution answers the purpose admirably:

Hydrogen peroxide.....r.....9 parts.
Euthymol, ...1 part.

Fasten the tampon to the end of a flexible probe, conduct it into the nose and with gentle vibratory movements, coming from the biceps muscle, coming in contact with every part of the nasal cavity to be reached. Such treatment should last from four to five minutes, and repeated each day at least four to five weeks, after which time it may be performed twice a week. Cauterization by chemicals, as well as the galvano-cautery, is wholly to be condemned.

A treatment, such as this, carried out for a sufficient length of time, will yield remarkable results.

VENTRAL FIXATION AND LABOR.

The operation for attaching the uterus to the abdominal wall for the purpose of curing retro-displacement has now been a recognized procedure for more than eleven years, and in one or other of its forms has pretty uniformly secured the endorsement of the profession. Experience has shown that this is a fairly safe and reliable plan of treatment of retro-displacements. The influence of this operation on subsequent pregnancies and labors was naturally a matter of concern to operators. Within the past year or more a number of reports of complications under these circumstances have come from different quarters, and the question is in a fair way to be solved. Dr. Chas. P. Noble, in a paper before the American Gynæcological Society (May, '96), has collected a number of statistics, both American and foreign, bearing on this subject. Among the recorded complications in labor after this operation are forceps delivery, retained placenta, Puorro-operation, and in pregnancy, uncontrollable vomiting and abortion. The deductions which he draws from a study of these cases are: 1. That women subjected to this operation are less apt than others to become pregnant. 2. That pregnancy and labor are, as a rule, uncomplicated. 3. That inertia uteri is not unfrequently met with. 4. That serious or insuperable obstination to labor may be produced if the fundus and anterior wall of the uterus are imprisoned below the point of attachment between the uterus and abdominal wall.

There appears to be a very important relation between the technique of the operation and the subsequent obstetrical complications. There are, broadly speaking, two methods of operation—the one aiming to secure a broad firm attachment of the uterus to the abdominal wall; the other, a light attachment, so that in the course of a few weeks there exists only a band between the abdominal wall and the uterus, which admits of great mobility of the organ. To this the name of suspensio-

uteri has been aptly given. Of the former method some operators, especially the Germans, have adopted the plan of opposing the anterior face of the uterus to the abdominal wall, while others have so far ante-flexed the uterus as to bring the top and posterior face of the fundus in relation with the belly wall. It has been chiefly in this class of cases that trouble has arisen. In the course of development of the uterus under these circumstances the bulk of the organ lies in front of the point of suture and forms a large mass which obstructs the pelvic inlet, while the remaining lesser part of the organ must accommodate the growing product of conception. It is thus much thinned out and less able to expel the fetus.

In conclusion, it might be fairly stated that when this operation is done upon women in the child-bearing period, when one or both ovaries are left in, that technique should be adopted, which admits of free mobility of the organ, and that the posterior face of the fundus should never be firmly attached to the abdominal wall.

THE MODERN TREATMENT OF TYPHOID FEVER.

Recognizing the cause of typhoid fever to be the typhoid bacillus and the absorption of its fermented products, the anatomical lesions, a congested or inflamed state of the glands of the small intestines, it is very proper that we direct our treatment to prevent the introduction of the germs, to destroy and limit their power and accelerate their elimination, as well as to overcome their toxic effect. To prevent their introduction, pay strict attention to cleanliness, hygienic surroundings and the ingesta of food and drink. To destroy and limit their power, introduce into the stomach and bowels drugs of antiseptic and germicidal properties—tinc. iodine, carbolic acid, salol, beta-napthol, carbonate of guiacol or sulpho carbolate of zinc, the last two of which are probably the best and most modern, except it be the mild chloride, which, aside from its germicidal properties, excites a flow of bile, nature's own purifier and preserver. It also stimulates the other excratory organs. Contrary to the teachings of fifteen years ago, we desire. and try to secure the free evacuation of our patients bowels from two to four times every day from the beginning of the attack, and not wait for the irritation and perhaps ulceration of the inflamed intestine to induce a diarrhœa that endangers the sufferer's life and is very difficult to control. The daily and free evacuations are sources of free elimination of germs and poisons, and by the due attention to the other emunctories and an occasional enema, will greatly modify the course of the disease.

One of the most, if not the most important point of treatment, is the diet; its regulation in quantity and quality, as consistency. It is very necessary to discover what kind of food is best suited for each individual case, and also to ascertain the quantities in which it can be taken. A surplus of food will add irritation to the intestines, and perhaps burden the cell action in elimination of toxines and effete materials.

URIC ACID DIATHESIS.

The origin and manifestations of uric acid in the mammalian body has been the subject of much investigation and thought upon the part of experimentalists.

Notwithstanding this labor we are as yet without a satisfactory conception of those underlying conditions and causes characterized as the uric acid diathesis. For a considerable period the prevailing opinion has been that this diathesis was attributable to an excess of uric acid in the system as the result of either of overproduction or deficient elimination, or both combined. The chemist had preceded the physiologist in this question, and had taught that uric acid was a suboxidized or antecedent product in the formation of urea, and that the former was an incompleted substance in the formation of the latter. The English physiologists were controlled by these views and influenced clinical practices to an extent where methods of therapautics were inaugurated to further the processes of oxidation in the tissues of the body, hoping thereby to promote those chemical processes by which uric acid was transmuted into urea.

The profession of this country has accepted these doctrines bodily without

passing back to examine and prove the original assumptions or premises upon which they were grounded. Recent investigations into physiological chemistry show that these conclusions as to the chemical relations of uric acid and urea were false and that no such relations existed. It has been shown that the antecedent or mother substance of uric acid is nuclein, a product of the white-blood corpucles. Under ordinary conditions of oxidation in the organism this nuclein is split up into uric acid and other by-products, which are eliminated under their own form and are never carried forward into urea. If for any cause the nuclein is not split up into these substances, as is the case under conditions of suboxidation and slowed nutrition, then certain other zanthin bodies, such as adenin, guanin and sarkin appear as the result and that these latter produce toxic phenomena usually characterized as the uric acid diathesis. It is to these substances and not to uric acid, as Haig claimed, that we must look as the real factors in this condition.

URIC ACID AS A FACTOR IN DISEASE.

The part that uric acid plays in the production of morbid conditions is now fully recognized. It is of no mean import then when we find it accountable for a long train of symptoms—many of which are obscure, and many not easy to formulate. And by reason of obscurity it can cause no surprise that errors in diagnosis are made. That many failures of relief are recorded, because the tendency has been to recognize and treat symptoms only instead of the true pathologic entity underlying the whole.

There is reason to believe that nearly all cases of periodic or paroxismal headache, melancholia, not accounted for by other factors, and much of that undefined class of diseases denominated neurasthenia, are attributed to this cause. Then we have rheumatic affections, tonsilitis, cutaneous irritation, as in the various forms of eczema, anemia and menstrual disorders.

A careful scrutiny is necessary in these cases in order to distinguish the actual condition present, as there is no one symptom which will interpret or cover the whole field of inquiry.

Help may, however, be obtained if we remember that it is almost always associated with gastric disorders, malnutrition, the result of disturbed assimilation, with more or less high arterial tension, super-acidity of the urine, of abnormal color, and probably scanty in amount.

These symptoms are not due to increased production of uric acid in the blood and secretions, but to its retention and storage in the various tissues of the body. A normal daily amount may be produced, and yet if the blood is not in a condition to carry it on as affete matter, or the kidneys to eliminate it, deposits take place with the resultant cumulative interference with the normal functions of the economy.

The indications for the relief of this morbid condition due to excess of uric acid in the system is to render the blood in a proper condition to dissolve out the deposit in the tissues and make the uric acid a soluble urate.

We have for this purpose a ready remedy in the so-called salines. The salicylates, and peperazine, and lysidine, have met with decided favor; have rendered good service and are well worthy of trial. Haig states that iron cures anemia by clearing the blood of uric acid; that the administration of uric acid will quickly undo its work, and that if in any case it fails to clear the blood of uric acid it also fails to cure anemia. That when iron fails to cure, other drugs that have more power over uric acid, or act in a slightly different way, may succeed; but that no drug of any kind will succeed if it fails to clear the blood of uric acid.

This is the principle of treatment in all cases—clear the blood and tissues of uric acid and the rest will follow. The symptoms will vanish.

FOWLER'S SOLUTION COMBINED WITH MORPHIA IN CHOREA.

Fowler's Solution is an old remedy in chrea, and has proved beneficial even when given by the stomach. Given thus it requires time to show what it will accomplish, and in some cases no good results whatever are observed. Large doses are required to benefit, but in

many cases the patient cannot bear the necessary doses by the stomach. Hammond in one week benefitted a little girl, who had taken Fowler's Solution per orem for a long time, more by giving the same remedy hypodermically than she was benefitted by all her previous treatment. A patient will bear double the amount of this remedy hypodermically than he will per orem. It is not the systemic effects that prevent the ability to take large doses, but the local effects upon the stomach. Hence the superiority of the hypodermic method.

The only drawback to the hypodermic method is its tendency to produce inflamation of the parts into which it is injected. When injected alone severe inflamation will doubtless result, and this often occurs when diluted with water. The best vehicle with which to mix it is glycerine, as this often being injected becomes further diluted by exasmosis as a result of the great affinity of water for glycerine. The irritating effects of Fowler's Solution can be also modified by leaving out, in its manufacture, the compound spirits of lavender.

I generally use equal parts of glycerine and Fowler's Solution for my injection, and apply cloths wet with cold water to the part injected. Sometimes by this method there is no suppuration. I also apply antiseptic methods in the operation.

In many cases I have been much surprised at the good effects of this method in bad cases of chorea.

The following was a remarkable cure: In 1890 I was called to see a girl, 15 years of age, who was completely wild with chorea. She could not be still a second day or night. She would turn and twist in bed like a snake. The movements were continual. She belonged to a rheumatic family, and all the rheumatic attacks were accompanied by choreic symptoms. It is well known that there is a connection between the two affections. She had no rheumatism during this attack. I gave two syringefuls of equal parts of Fowler's Solution and glycerine combined with one-eighth grain of morphia.

In about 10 minutes she vomited, but I thought this to be due to the morphia. I went away, telling her parents I would return the following day. When I returned to see her I was surprised to find her up walking about, and I learned she had been romping with the other girls. On this visit I gave her one syringeful of the solution combined with the same sized dose of morphine as on the previous day. From this time on she had no more choreic movements.

I regarded it as a most remarkable case, and have followed the same method of treatment since that time with the best results.

A medical friend had been treating a case of chorea for three months without success, although he had steadily given Fowler's Solution per orem with other remedies. Having informed him of my method and success, he applied it in his case, and cured the patient with a few injections.

I was induced to try hypodermic injections of Fowler's Solution in this malady by the success of Hammond in some of his cases, but the addition of morphia was my own idea.

I generally have my patients continue taking, *per orem*, five drop doses of Fowler's Solution three times a day for some time after the disease has succumbed to the hypodermic injections.

SENSATIONAL SURGERY.

The newspapers of the South and West often contain from one to two columns of a sort of diarrhœa of words of a very thin character, intermixed with an offensive windy description of some "wonderful" surgical operation performed by a certain metropolitan operator who, by "extreme delicacy" of manipulation, "wonderful skill and rare courageous effort never before attempted," gives "remarkable relief" to the patient, who was, before the operation, in a "dying condition;" "utterly without hope;" "given up" by all former physicians and came hundreds of miles to be treated by this æsculapian phenomenon who attempts (?) to hide his light under professional modesty, "so characteristic of him," and apparently is an unwilling victim of the enterprising newspaper man's efforts to spread the news regarding the exploits of this surgical freak.

Whether such articles emanate from the reporter's innocent ignorance as to what really constitutes true surgical fame,

or from a sly alliance between him and the elastic medical man, may not be thoroughly apparent, but whatever may be the cause, the recurrence of such publications is to be none the less deeply regretted, and severely condemned, by all those who desire to see upheld the honor and genuine dignity of our profession. It is to be hoped that newspaper correspondents will become better educated in regard to legitimate news concerning professional men and things.

MEDICAL AUTHORS AND THEIR RIGHTS.

We have information to the effect that Messrs. Wm. Wood & Co., of New York, the publishers of the Medical Record, and the American Journal of Obstetrics, have refused the editors of the American Year-Book of Medicine the privilege of using abstracts or articles published in either of these journals. This is certainly a new departure in medical circles in this country.

If these publishers are in this business solely and exclusively for commercial purposes, and no relations, such as have hitherto passed as under the guise of courtesy, are to be respected or continued, then it is time that the profession should undertake some measure for self protection. We have always understood that the contributors to those publications never received any monetary consideration for their articles, but the reputation of them was sufficient inducement to write for their columns. This reputation came not through the journals' direct circulation, but from the abstracts, copies and the like that was made from them. If this source of reputation is to be deprived of its chief value then the profession will find other avenues through which to reach the reader at large.

The fact is this country is too large and too free from provincialism for one to believe for a moment that one journal can in the least possible manner handicap the welfare and interest of the medical profession. In the measure proposed the profession can seek other channels.

We trust that the press will give this matter serious consideration, and pursue such plans as will counteract this attack upon their interest.

THE MEDICO-SURGICAL BULLETIN.

We note the change in this periodical from a weekly to a semi-monthly. Through this change we are to miss the accustomed weekly visitations of this ably-edited journal, and we are sorry for the change. Taken all in all the Medico-Surgical Bulletin is one of the best edited publications in this country. Its clear thinking, judicious and versatile editor-in-chief is one of the few real scholarly men in American medical journalism. In its abstracts and clippings this journal is easist the first of all others.

BOOK REVIEWS.

REFERENCE BOOK OF PRACTICAL THERAPEUTICS. By various authors. Edited by FRANK P. FOSTER, editor of the New York Medical Journal and of Foster's Encyclopedic Medical Dictionary. In two volumes. Volume I. New York: D. Appleton & Co. 1896.

The author states in the preface that the leading idea in the preparation of this work has been to make it pre-eminently serviceable to the practicing physician. It is not intended to take the place of treatises on materia medica, or on pharmacy; hence, as regards the physical properties of drugs, their mineralogical, chemical, botanical or zoological relations, etc., the endeavor has been to set down only so much as is of direct bearing on the use of these drugs in medical practice or in the management of poisoning due to them.

Even accounts of the physiological actions of drugs are condemned, for much of what the experimental pharmacologist justly looks upon as essential to the prosecution of his studies is useless and clogging superfluity to the physician in his daily work of treating the sick. For the same reason, profusion of references to literature has been avoided, although at the same time it is believed that due credit has been given as to sources of information.

The above paragraph describes the scope of the work very nicely. It is one of the most complete works on Practical Therapeutics that the writer has seen. Dr. Foster has certainly utilized with the judgment of the skilled editor in selecting the writers of his new book. His long connection with the "Encyclopedic

Medical Dictionary" and the New York Medical Journal, a very able journal, naturally brought him close relation with the leading men in our profession throughout the country. The range of this work is not limited to the action of drugs, but includes curative measures of descriptions, outside of surgical methods, such as the use of the diets, exercise, massage, climate, heat and cold, hydriatics, electricity, condensed and rarified air. Each subject is treated according to its importance, and may readily be found on account of the alphabetical arrangement and prominent type of the headings. The work is in every sense worthy of hearty commendation. The authors are to be congratulated on the appearance of the volume, and the publishers have done their part exceedingly well.

THE PRACTICE OF MEDICINE. A Text Book for Practitioners and Students with Special Reference to Diagnosis and Treatment, by JAMES TYSON, M. D., Professor of Clinical Medicine in the University of Pennsylvania and Physician to the Hospital of the University, etc. Illustrated, Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1896. $5.50.

The day for a systematic treatise covering the whole field embraced by the term practice of medicine, written by a single author, has evidently passed. The subject is so extensive, intricate and diverse that it is physically and intellectually impossible to treat it properly from the personal standpoint. Notwithstanding this fact, we believe that the above work of Dr. James Tyson comes nearer covering this field than any recent book on the subject. In the preface he states that he has supplemented his own personal knowledge and experience with others whenever it was necessary to fill gaps in the same. We confess that the evidence of these gaps are few and far between, and the individuality of the author pervades the book in every part. As a rule works upon the practice of medicine by individuals bear strong evidences of the personal factor operating in some particular direction. In Flint and Loomis the acute Clinician is uppermost; in Osler and Niemyer it is pathology; in Wood, the younger, and Bartholew, therapeutics takes the lead; while the elder Wood was the all-round author, giving each part its due weight and proportions. His text book, after forty years, is still good authority on many questions. If we would compare any of these writers mentioned with the present one we would place him nearer to Wood than the others.

One who knows the previous history of the author would expect the book to be especially strong in its treatment of diseases of the eliminative appratus. This is the case. The chapters dealing with the diathetic and renal disorders are exceptionally good. We are inclined, however, to dissent to some extent with that portion of the work where the author, following the tendencies of Haig, Duckworth and Garrod, would ascribe gout, lithæmiæ and allied conditions so exclusively to uric acid. Recent investigations in relation to the conditions of auto–intoxication from the intestinal canal, would also warrant the conclusion that these have also considerable influence as etiological factors in these disorders.

That part of the work dealing with malarial and typhoid fevers is full, clearly stated and up–to–date in etiology and treatment. The diagnostic technique given in connection with diseases of the stomach is remarkably lucid and accurate in details.

In conclusion we cannot speak too highly of the general make–up and thorough character of this bo6k. It is every way commendable, and cannot but add to the reputation of the capable gentleman who wrote it.

THE DISEASES OF THE MALE URETHRA. By R. W. STEWART, M. D., M. R. C. S., Surgeon to Mercy Hospital, Pittsburg, Pa. One volume of 229 pages, post-octavo. Illustrated by numerous wood engravings. Muslin, $2.50: flexible morocco, $3.25. New York: William Wood & Company, 1896.

There is no part of the human frame that should be more thoroughly understood than the male urethra. While it is of so great importance, yet it must be asserted that it receives less attention than other parts of less importance.

Until recent years the medical profession has failed to apply to the urethra the same sound reasoning, based on a knowledge of pathology, which has been

applied to other parts of the body. This is partly attributable to the fact that during life the facilities for examining the urethra have been imperfect, and the opportunities for examining it after death have been neglected; and partly to the dogmatic views on the subject which have been taught by recognized authori ties, and accepted, like gospel truths, more on the faith in the infallibility of the teacher than on the exposition by these views of obscure points in urethra diseases. With the advent of improved instruments for intra–urethral inspection, togteher with the general advancement in our knowledge of bacteriological and pathological subjects. a new era in urethral pathology has been ushered in and many radical advances have been made, not only in the pathology but also in the treatment of urethral diseases.

This work contains 220 pages, and the subject is presented to the reader in as concise a form as is consistent with its proper elucidation. Wherever necessary to facilitate the understanding of the phenomena of urethral disease, the ana–tomical and physiological points bearing on the subject are fully considered. In this work much space has been given to the pathology of the diseases of the urethra, this is particularly so in that part of the work devoted to the consider-ation of chronic urethritis. This work also contains full descriptions of the inflamatory diseases of the glands which communicate with the urethra. In the treatment of stricture the necessity of discriminating between stricture of large and small calibre is emphasized, and the relationship of stricture to gleet is consid-ered in detail. The work is nicely bound and beautifully printed, and will be a safe and most welcome guide in the treatment of this troublesome class of affections.

A Text Book of the Practice of Medicine for the Use of Students and Practitioners. By R. C. M. Page, M. D., Author of "A Chart of Physical Signs of Diseases of the Chest," A Handbook of Physical Diagnosis of Diseases of the Organs of Respiration and Heart, &c., &c. Second Edition. New York: J. H. Vail & Company, 5 East 17th St. 1896.

Page's Practice of Medicine is, per-haps, as well known and as frequently consulted as any other work of a similar character. Many Southern physicians are peculiarly fond of him from his rela-tionship to the Polyclinic, this institution being headquarters for many Southern doctors.

This work contains 538 pages, and is a concise synopsis of the principal essen-tial points in the practice of medicine. By its careful perusal it will facilitate clinical instruction, and enable both phy-sician and student to obtain the most practical as well as scientific view of the various subjects treated of in a work on medicine. While it is far from me to condemn extensive treatise and systems, but rather consider them invaluable as monuments of research, I believe that shorter works and to the point as the one before us, are both called for and prove valuable aids. All the essential points in pathological anatomy and bacteriology are given in sufficient detail, and great care has been bestowed on etiology, diag-nosis, and prognosis. The respiratory and cardiac diseases are particularly well described. Regarding the treatment we find one of the excellent features of the work in that the author goes more into detail than is customary, not only are drugs mentioned, but in many instances the prescription and dose are given. The work has every element of perfec-tion as regards its make up, and we re-gard it very highly and gladly commend it to our readers.

International Clinics. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthal-mology, Laryngology, and Specially Prepared Articles on Treatment by Professors and Lecturers in the Leading Medical Colleges of the United States, Germany, Austria, France, Great Britian and Canada. Edited by Judson Daland, M. D., Philadelphia; J. Mitchell Bruce, M. D., F. R. C. P. P., London; David W. Finlay, M. D., F. R. C. P., Aber-deen. Vol. II. and Vol. III. Sixth Series. 1896. J. B. Lippincott Company. 1896.

The readers of the International Clinics are too familiar with the character and style of the work to require lengthy re-views for their purchase. The appear-ance and general make-up has of late years been greatly improved. This is particularly true of the illustrations. As heretofore they contain 43 contributors, chosen from well known clinicians. The writers are recognized by the pro-fession everywhere as progressive yet

conservative physicians, with large experience with the diseases of which they write. The last volumes have placed greater emphasis on the commoner diseases, and especially to the treatment of these diseases in articles especially prepared for practitioners.

These articles are always of the highest practical value, and will always be so regarded in medical literature.

TWO HEALTH SEEKERS IN SOUTHERN CALIFORNIA. By WILLIAM A. EDWARDS, M. D., and BEATRICE HARRADEN. Philadelphia: J. B. Lippincott Company. 1897,

This is a very interesting and useful little book, and will be of great value to those seeking the climate of Southern California for health. The writers very tersely say that no climate is perfect, and that those seeking climate for their health should do so early. The first and fourth chapters of the book are written by Miss Harraden. The work is neatly printed.

TRANSACTIONS of the New Hampshire Medical Society, at the One Hundred and Fifth Anniversary, held at Concord June 1st and 2d, 1896. Published by the Republican Press Association.

These transactions make quite a nice volume. They contain 197 pages, clearly printed and nicely bound. The articles are well chosen and equally well handled.

TRANSACTIONS of the Medical Society of the State of California. Session. 1896.

Through the kindness of the Secretary, Dr. W. W. Kerr, these transactions are before us. They are neat, interesting, and well gotten up. They are well bound and make a nice library volume.

LITERARY NOTES.

LIPPINCOTT'S MAGAZINE FOR JANUARY, 1897.—The complete novel in the January issue of Lippincott's is "Stockings Full of Money," by Mary Kyle Dallas. It is a tale of domestic relationships and affections, but turns on the mysterious disappearance of two thousand dollars, and the various suspicions as to the thief.

Henry Willard French, in "A Christmas Midnight in Mexico," narrates an adventure of the road which might have ended disastrously. The other short stories are "An Anonymous Love-letter," by Virginia Woodward Cloud, and "Robert the Devil," by Claude M. Girardeau.

The question, "Are American Institutions of Dutch Origin?" is discussed at some length by Sydney G. Fisher, who controverts the late Douglas Campbell's contention that the Town-Meeting came from Holland.

R. G. Robinson, who is an authority on the aspects and prospects of his own region, writes lucidly and instructively on "South Florida before the Freeze." The relations of "The Western Housekeeper and the Celestial" are described from experience by May Hoskin.

Emily Baily Stone, whose specialty seems to be Woman in the Middle Ages, treats lightly, with many citations, of "Marrying in the Fifteenth Century." "Theatre-going in St. Petersburg" is handled by Isabel F. Hapgood, who knows pretty much everything about Russia.

Allen Hendricks tells of an outing "With the Whitefish Nets," and Lee J. Vance expounds the mysteries of "Walnut Lore."

The poetry of the number is by Marie M. Meinell, Julien Gordon, Mary E. Stickney, and Carrie Blake Morgan.

THE JANUARY FORUM.—The January Forum opens with an extremely interesting study of "Pope Leo XIII" by the Vicomte E. Melchior de Vogüé, who traces briefly, but with perfect freedom, the successive developments of this lofty genius, and the corresponding increase in the prestige and moral power of the Papacy throughout the world. The Vicomte de Vogüé's frequent visits to the Vatican, and the high esteem in which he is held by the Pope, lend unusual weight to his article. Mr. O. D. Ashley, President of the Wabash Railroad, discusses the tariff question from the point of view of a business man; advocates "middle ground" between the two extremes of policy; and suggests the appointment of a bi-partisan commission to collect evidence on the subject, with a view to reporting such changes as may in its opinion be advantageous to the industrial interests of the country. Dr. J. M. Rice continues his valuable series of articles on "The Problem of Elementary Education," with a paper on "The Es-

sentials of Elementary Education." Herr Alexander Moszkowski, the eminent German musical critic, contributes a brilliant paper on some "Modern Composers in the Light of Contemporary Criticism" —Wagner, Rubinstein, and Brahms. "The Wanton Destruction of American Property in Cuba" brings out a vigorous protest from Mr. Fernando A. Yznaga, who, after showing that this destruction is unnecessary that it has already cost American citizens more than $50,000,000, advocates interference by the United States Government and the annexation of Cuba by purchase. Hon. Alonzo B. Cornell, ex-Governor of New York, contributes a very timely article on the paralyzing effect upon business of Presidential elections, suggesting as a remedy that the Presidential term be lengthened to six years, and the Congressional term to three years. He recommends that ex-Presidents be elected members of the Senate. Mr. J. Gennadius contributes an extremely interesting paper on the work of the American School of Archæology in Greece, describing the discovery of an ancient Greek theatre at Thorikos.

Two important new books are reviewed in the January Forum. Hon. Theodore Roosevelt discusses in an extremely interesting paper Mr. Brooks Adams's remarkable book "The Law of Civilization and Decay," than which, in Mr. Roosevelt's opinion, few more powerful or melancholy books have been written; and the first volume of Dr. Eggleston's "History of the United States," upon which he has been engaged for fourteen years, is reviewed by Professor William P. Trent, of the University of the South, who pronounces it "a contribution of lasting value to our historical literature."

Other articles in the January Forum are "The Urgent Need of a National University at Washington," by President David Starr Jordan of the Leland Stanford Junior University. "The Philosophy of Meliorism," by Junius Henri Browne; and a timely paper by Professor R. C. Ringwalt, of Columbia University, on "Intercollegiate Debating"—its scope, mechanism, and valuable results.

A New Volume.—With the number bearing date January 2, The Living Age begins its *two hundred and twelfth* volume. This sterling magazine loses none of its interest or value, but rather grows in excellence, as its years increase—adding the experience of the past with full appreciation of the needs of the present.

This is emphasized by the advanced step it has just taken. If anything more were necessary to make it an ideal magazine, especially adapted to the needs of the American reader, then the additions of a Monthly Supplement devoted to Readings from American Periodicals, Readings from New Books, and a List of Books of the Month, is that thing.

The general reader is put under further obligations to the publishers of The Living Age for giving them, in addition to what has heretofore been presented in its pages, and the above mentioned Supplement, translations from the periodical press of Continental Europe. Hitherto this wide field, containing much of interest and profit to the American public, which is so alive to every question of the day, has been unknown ground, to all but the favored few.

The first number of the new year has the following table of contents: "The Olney Doctrine," by Sidney Low; "The Duel of the Period in France," by James Pemberton Grund; 'Bandi Miklos,' *from the Hungarian*, by Selina Gaye; "A Modern 'Morality,'" by Jules Lemaitre, *from the French;* "The Puritan in History," by Principal Fairbairn; "Recollections of Coventry Patmore;" "Catholic Mystics of the Middle Ages," and "A Winter's Walk;" with poetry and fiction.

This, the first weekly issue of the new year, is a good one with which to begin a new subscription. For fifty-two numbers, aggregating about 3600 pages, (300 pages a month), the subscription price ($6.00) is very low.

The Living Age Co., Boston, are the publishers.

The "Progress of the World," in the Review of Reviews for January, 1897, gives an admirable *resume* of the great world events of 1896. Nowhere else can so faithful and impartial a chronicle of these stirring times be found. This illustrated editorial summary in each month's Review is everywhere recognized as one of the triumphs of modern journalism. The discussion of the Cuban situation is enlivened by the reproduction of timely Spanish and Spanish-American cartoons.

The January number of Scribner's Magazine marks the beginning of its second decade with an entirely new dress of type. From the very first issue Scribner's has been an accepted leader in modern magazine literature and art.

The plans for 1897, as already announced, are the most extensive and attractive ever prepared for this magazine.

While always choosing the best, independent of nationality, it is to be noted that, for the coming year, the leading features of Scribner's will be American.

Both of the serial stories are by American authors—Richard Harding Davis and W. D. Howells.

Charles Dana Gibson, the distinguished American artist in black and white, will contribute a series of six articles on London—contributing both the text and illustrations.

There will be notable series of articles also on The Conduct of Great Businesses in America, and on Undergraduate Life in American Colleges.

Col. T. W. Higginson in his reminiscences in the January Atlantic speaks of an interesting coincidence. It was his habit to read late into the night, and sitting up till four one morning he left his bookmark at an unfinished page, having to return the book to the college library. A year later he happened to take the book from the library again, chanced to get up at four o'clock to read, and began again where he left off. Afterwards looking in his diary he found that he had skipped a precise year between the two days and continued reading the same passage.

A new novel by Paul Leicester Ford, the author of "The Hon. Peter Sterling," is to appear in the earlier issues of the Atlantic Monthly for 1897. It is called the "Story of an Untold Love," and unlike his other famous novel it is not a political story, simply a love story of a most attractive quality. It is, however, full of dramatic interest, and promises to be one of the leading novels of the year.

Margaret E. Sangster, whose recent book, "Among My Neighbors," received such a warm welcome from the public, has written what is said to be her best short story for the Christmas number o Frank Leslie's Popular Monthly.

The Purpose of Pathological Processes.

Ziegler says that processes occurring in consequence of injury to the tissues are in part beneficial to the individual yet it must not be concluded that the definite vital manifestations are always purposeful in that sense, or that the processes leading to repair always best answer the object in view. This question is not of mere theoretical interest but of practical importance. In the infective diseases the processes mostly manifest themselves in inflammation and fever. In cases which have terminated favorably a definite change has taken place in the tissues, making the individual immune against the disease. Some teach that inflammation is to be regarded as the contest of the tissues and organs against injury or harmful substances. In fever the metabolic processes which produce in the first place a rise of temperature, are looked upon as beneficial. If the pus or tissue cells are able to take up bacteria and kill them, this would constitute a reparative process. If the body temperature rises in a disease to 39° or 40° C., and the microbic cause of the disease is killed by exposure to a temperature of 35° to 38° C., this should lead to a disappearance of the morbid manifestations. If in the course of an infective disease substances antagonistic to the bacterial poison are produced, this must be looked upon as an extraordinarily beneficial occurrence for the individual against the infection and intoxication. If, however, the inflammation ends in an abscess as of the brain or liver, or if the exudation in the air passages leads to their narrowing, such results are not beneficial. If bacteria find in the cells a favorable medium for growth, no limiting effect can be exercised on the disease but a further extension is likely to ensue. If the metabolic products have no harmful effect on the bacteria, and do not counteract the effects of bacterial poisons, they are not only useless but noxious by producing degeneration of vital organs. Thus it would appear that the pathological processes accompanying the infective diseases have a very varying value, and what

may be useful in one may be harmful in another. The papules of measles and vesicles and pustules of small-pox are not the expression of any beneficial reaction of the individual, but result from the different nature of the measles and variola poisons. This view is opposed to that held by some, that the individual always reacts in the way which is of greatest service to himself. Selection is not always in a position to adapt man and animals to the altering conditions of life. This is particularly well seen in the infective diseases. The infections are numerous, and the dangers of spread are much increased through the habits and customs of modern life. Phagocytosis is only a vital manifestation of cells which has for its object their nutrition. If particles or bacteria are not suited for the nutrition of these cells they are thrown off again. Thus in infective disease processes occur which are adapted for the protection of the individual, but others also exist which favor the bacteria or the causes of disease. In diphtheria, tetanus, cholera, the most potent and useful event lies in the production of substances antagonistic to the bacterial poisons. The knowledge of these processes has contributed greatly to the prevention and treatment of disease. It would be wrong to assume that such active bodies are present in all infective processes. Pathological processes must be divided into the useful and the harmful, of which the former are to be promoted and the latter hindered. Further advances on these lines are to be expected in the future, but these advances are not made by applying the results of observations obtained in one infective disease indiscriminately to all other diseases.

Tapping the Pericardium.

At the Edinburgh Medical Society, Nov. 13th, 1896, Dr. Meldon read a paper with this title.

In 1663 Riolanus first proposed paracentesis pericardii. One hundred years later Senac stated that the operation was possible, and still later Van Swieten suggested a method of performing it. In 1819 Romero, of Barcelona, operated with perfect success. Jowett, of Nottingham, operated in 1827, and Schuh in 1839. At present just 100 cases had been recorded, and he believed that many more had occurred which had never been published. Out of all these cases, only once had the operation proved fatal. In this unsuccessful case the right ventricle was lacerated by the trocar. Some others had died soon after the operation, but these were cases that were moribund at the time it was undertaken. The remainder were, without exception, relieved, and many of them cured. Under these circumstances it was clearly the duty of the surgeon, whenever death was imminent from cardiac pressure, to resort to tapping. Experience, too, had shown that the operation is not attended with great danger, and certainly in cases of effusion from rheumatic pericarditis there was every prospect of recovery. He had seen several cases within the last thirty years, in which he was convinced that the fatal termination was due to pressure of fluid in the pericardium, and might have been averted by drawing off the fluid. On one occasion he was able to verify this opinion by a *post mortem* examination. He then gave details of two successful cases of tapping the pericardium. The first case occurred some years ago. The patient was a woman, aged 58, and seemed to be dying from increasing hydrops pericardii. The instrument he selected in this pre-antiseptic period was a long hydrocele trocar, which was washed well in very hot water. An incision was made into the skin 2 inches from the sternum in the fifth intercostal space, and, in order to make it valve like, the skin was drawn up to the full extent possible before making it. A trocar was with some difficulty inserted, and on withdrawing it fluid of a dark colour followed. When 8 ounces had been withdrawn the fluid flowed very slowly; the instrument was therefore taken out, and the wound covered with flexible collodium. As the patient appeared faint, a little brandy and ammonia was administered. An hour later all difficulty of breathing had disappeared, but although the patient expressed herself completely relieved, a very slight cyanotic condition remained. On the following morning this was gone, and her pulse was strong and regular. She left the hospital five weeks later in perfect health. The second case was that of a man aged 26, to whose bedside Mr. Meldon was

summoned on March 5th, 1894. He was suffering from rheumatic pericarditis, with great difficulty of breathing, præcordial dullness was greatly increased, and cyanosis and epigastric distress to a considerable amount were also present. The pericardium was tapped, and almost immediately the patient's breathing improved to such an extent that when 5½ ounces had been removed the needle was withdrawn. Cyanosis, dyspnœa, and epigastric distress completely disappeared in a few hours. The fluid, unlike that in his previous case, was a healthy serum. On August 31st, 1894, a case occurred in the practice of Dr. Joseph Redmond in which 22½ ounces of dark coloured fluid were removed, and seven days later 27½ ounces were also taken out. In this case which recovered perfectly, a drainage tube was subsequently inserted. Dr. Patrick Hayes was the surgeon who operated. The statistics of paracentesis pericardii showed that the fifth left intercostal space, at a point one inch to the left of the sternum, was the most suitable place for puncture. The selection of the instrument would likewise seem of some importance. If too small a cannula were used it was apt to become plugged with flakes of lymph. Mr. Meldon showed two instruments which had been made for him. One was to be used with and the other without an aspirator. Both become arrested when two inches of the instrument had passed into tissues, and then any further depth was obtained by a screw motion. This latter is the suggestion of Dr. Woods. The author believed that when there was any fluid in the pericardium it was quite safe to plunge the trocar in fully two inches.

Alchoholism and Suicide.

It is an established fact, says the London Lancet, that suicide is on the increase.

Dr. Franz Müller, of Munich, in a paper read before the recent International Congress of Psychology, argues ingeniously for the pre-eminence of the alcoholic factor in the etiology of self-murder. He gives a very interesting historical sketch of the subject, pointing out that there is no ordinance in the Bible probiting suicide; that it was countenanced on various grounds by the Stoic philosophers and the Spartan law-givers, and that the Roman laws against it were framed in the interests of the State, and not based upon ethical motives. The author then gives a number of statistics relating to the subject. The annual number of suicides in Europe is estimated at 50,000, and is increasing at a far greater rate than the population; thus since the Thirty Years' War the population of France has grown by 13 per cent., and the number of suicides by no less than 130 per cent. Some of the details are curious; thus suicide is four times as common in Saxony as in Rhineland, and in men as in women, while Protestants terminate their own lives much more frequently than Catholics. Suicides are most abundant in Protestant Germany, least in the Catholic Romanic and Keltic races of Southern and Western Europe; in Frankfort–on–Main 342 people in every million commit suicide; in Portugal only 7. Most suicides are committed in June and in the early morning, least in December and towards midnight; the peasant class is the least, the mechanic the most addicted to suicide. The struggle for existence is a most important cause of suicide, and Dr. Müller holds that alcohol, blunting as it does the weapons used in the conflict, is the most frequent immediate detriment of the act. The form of alcohol upon which he lays especial blame is brandy. Summarizing his statistics on this point, we find that in the four years 1872–5, the average consumption of this spirit per head in eleven German provinces rose from 13.9 to 17.4 litres, or just 25 per cent. In England, he states, that the number of people arrested as "drunk and disorderly," rose from 75,859 in 1857 to 203,989 in 1875. In 1874–6 there were in the Paris asylums 367 lunatics with alcoholic histories; in 1886–8, 729. The annual consumption of brandy per head in France rose from 1.51 litre in 1841 to 2.84 in 1873. The number of chronic alcoholics in German asylums rose from 5,085 in 1877 to 11,074 in 1885. Interesting contrasts are afforded by Sweden and Norway on the one hand and Belgium on the other; in the former countries the annual consumption of brandy per head had rapidly fallen, and with it the frequency both of suicide and

of arson, in the latter suicide and cabarets have risen together. Nor does the author encourage any false security in the beer drinker; a mere quart of (German) beer contains at least an ounce of pure alcohol, and this we are reminded is a quantity which the habitual consumer would scarcely deign to recognize, save as a unit of measurement. Dr. Müller goes on to paint a gloomy picture of how the chronic drunkard sinks from stage to stage of moral and physical degradation, till at last his ganglion-cells are consumed, and he has no recourse left him but suicide.

Anti-Diphtheritic and Anti-Streptococcic Serums.

At a meeting of the Lycoming County Medical Society, held at Williamsport, Pa., December 1st. 1896, Dr. C. C. Fite, of New York, read a paper on the Nature, Method of Production, and Application for the Relief of Disease of the above named serums.

Dr. Fite said: 'As to the nature of anti-diphtheritic serum, I will state that the theory is a simple one. The diphtheritic germ, the Klebs-Loeffler bacillus, finds lodgment in the throat or elsewhere. It begins to grow and multiply, a membrane is formed, a poison is secreted and absorbed. This toxine overwhelms the life centres, paralysis and death may follow. Nature has in the meantime been endeavoring to overcome the danger that is threatening the patient, and has secreted an antitoxin to destroy the toxin.

This process was repeated millions of times for thousands of years, but we did not understand it, did not go deep enough into Nature's great laboratory. Finally the educational results of the germ theory had produced a long list of careful thinkers, and with that deep eye, the microscope, and by the aid of vivisection on animals, the secret was discovered, and now, all over the civilized world, are laboratories for the production of the precious fluid. * * *

I am indebted to Dr. E. M. Houghton, of the Biological Laboratory of Parke, Davis & Company, for the details of the method of manufacturing anti-diphtheritic serum. It is in brief as follows: First a culture medium is prepared by adding bouillon to blood serum, and then coagulating the mixture; this is known as Loeffler's blood serum. The diphtheria germs are secured by passing a sterile swab over the false membrane and the swab is then passed over the blood serum and the tube containing the now infected serum is inclosed with a cotton plug, and put into an incubator where it can be kept at the body temperature. After a few hours small colonies appear on the surface of the serum and the microscope is used to determine if the Klebs-Loeffler bacillus is present, and if so, if it is free from other forms of life. If it is a pure culture, small colonies are picked out and transferred to fresh serum and replaced in the incubator.

These growing germs are the seed used for producing the toxin; they are planted in sterilized beef bouillon. The germs then grow rapidly, and produce or secrete toxins which are retained in the bouillon. A small amount of a preservative is added and it is then filtered through unglazed porcelian, which removes the germs and all foreign bodies, leaving the solution clear. This solution of toxin is then injected into the jugular veins of a horse and as Dr. Houghton puts it, "We must now stand aside and allow the remainder of the miracle to be wrought unseen."

The horse's blood now contains an antitoxin which destroys the toxin we have been putting in it. The dose is repeated until, in the course of a few months, a horse can stand without injury a dose several hundred times stronger than one that would have killed him at the beginning of the treatment. Our horse is then our laboratory, but Nature has yet kept her secret as to how the antitoxin is produced. All we have to do now is to secure the blood from our patient friend, remove the clot, filter, sterilize and preserve the serum, and we have the result, a package of anti-diphtheritic serum, and we are ready to go on our life-saving errand. * * *

I consider it of the utmost importance that the serum should be as highly concentrated as possible, hermetically sealed, and only one dose in a package, and it should not be opened until we are ready to use it. By being careful about this, and using a clean syringe, avoiding the large old-style antitoxin syringe with the rubber tube, we can be confident that no

harm will come from its use, and it is of the utmost importance to use the serum as early as possible, and in full and repeated doses.

I think it is legitimate to add that the majority of those who have not been successful in their use of antitoxin have either not used it in sufficient quantity or early enough.

Referring to the anti-streptococcic serum Dr. Fite said:

Marmorek and others have used anti-streptococcic serum in cases of diphtheria showing the streptococcus as well as the Klebs-Loeffler bacillus, also in scarlet fever, puerperal fever, general septicemias, infective tonsilitis, erysipelas, and other diseases, whether due to, or complicated by, the appearance of the streptococcus pyogenes, and it seems as if it will prove of great value in other cases, perhaps in multiple abscess and in broncho-pneumonia, or in fact wherever the streptococcus is found as above stated.

In reference to its use in diphtheria, I am firmly convinced that it is indicated in all cases where the microscope shows the streptococcus and we almost invariably find it in cases which do not yield to the anti-diphtheritic serum and where we see a zone of inflammatory action extending beyond the area occupied by the true diphtheritic membrane. Therefore, if a case does not yield promptly to the anti-diphtheritic serum, we should, I believe, use the anti-streptococcic serum without waiting for the report from the bacteriologist.

The method of producing the anti-streptococcic serum is in the main a similar process to that used in the production of the anti-diphtheritic serum, or by injecting virulent cultures of the germs instead of the toxin.

I am indebted to Dr. Charles T. McClintock, of Ann Aabor, for advice in regard to this matter. Dr. McClintock writes as follows: "As regards the difference in methods for producing anti-diphtheritic and anti-streptococcic serum, I may say in general that the streptococcus, like a number of other germs, does not readily give off its toxin to the surrounding liquid. If you want to get the toxic properties of the germ, you must take its own protoplasm. On this account we are compelled to use the germs themselves, in order to successfully immunize an animal. The filtered toxines are not very powerful. This is the essential difference between the two materials. In the case of the streptococcus we use a living virulent germ in bouillon culture."

* * *

There has been a great deal of good work done quite recently in this investigation of the anti-streptococcic serum and I feel confident that we are near a solution of the problem.—*Abstracted from the Maryland Medical Journal, Dec. 19, '96.*

Cerebral Syphilis.*

Without going into the pathology of cerebral syphilis, it will be remembered that the disease generally attacks the structures formed from the mesoderm. Thus the tissues invaded are (1) the skull; (2) the meninges, and (3) the blood vessels. It is quite probable that syphilitic lesions occurring in deeper parts of the cerebrum have followed the blood vessels down, or can be traced to the pia mater. Syphilitic disease of the skull causing caries or exostosis may be widespread or localized, and the same may be said of syphilitic meningitis, which may extend over large areas of the base or convexity of the brain, or confine itself to a very limited space, constituting the characteristic focal meningitis. The blood vessels may be involved in general syphilitic arteritis, or may merely share in a local inflammation.

Syphilitic disease of the cortex appears in three forms: (1). Diffuse gummatous infiltration. (2). Localized patches of encephalitis. (3). Patches of sclerosis.

Syphilitic meningitis is nearly always chronic in its onset and course, and is for the most part localized. Headache is always present, and this may be basal or cortical, localized or diffuse. If the basal meninges are involved paralysis of the cranial nerves is the rule. When the vertical meninges or the subjacent cortex is affected it is very common to see epileptiform seizures. The most common form of mental disturbance is depression with mental hebetude and general change

*Abstract of a paper read at the semi annual meeting of the Medical and Chirurgical Faculty of Maryland, by George J. Preston, Professor of Nervous Diseases, College of Physicians and Surgeons, Baltimore.

of disposition. These cases similate very closely general paresis of the insane, and probably the mistake is not infrequently made clinically.

In general it may be said that the characteristic symptoms of cerebral syphilis are the irregular course of the disease, not confining itself to any system of fibres, attacking now one part of the brain, now another; more multiple than single; the transient nature of the paralysis; the frequent involvement of the eye muscles; the intense headache; the somnolency and the peculiar mental manifestations, now a state of excitement, now of depression or apathy. Contracted with any of the other forms of brain lesions the multiformity of the symptoms and their irregular course cannot fail to impress the observer.

The paper contained a number of illustrative cases and concluded with some remarks on treatment, urging especially the use of massive doses of iodide of potassium, from 300 to 500 grains daily, with perhaps mercurial innunctions in addition in certain cases.

Excessive Mortality Among the Negroes.

Ever since the end of the civil war, when our slaves were emancipated by the conquerors, the negroes who lived mostly upon the plantations, flocked to the cities in search of work. The death rate smaller than the whites, while under the paternal care of their owners, grew fearfully large, and became a source of annoyance to municipal boards. These, instead of devising means to reduce this death rate, have endeavored to cut the Gordion knot by separating the races in their mortality tables.

Dr. J. C. LeHardy, of Savannah, Ga., criticizes the city sanitary board for neglecting to give that part of the population the care and attention they are entitled to. After reviewing the causes of the excessive mortality among the poor and squallid negro, and the rights they have as citizens, he recommends the following rules, which, if they are rigidly enforced, will remove the principal causes of mortality among them:

1. Prevent rapacious landlords from building so many houses upon city lots, that the lots shall be thoroughly drained before issuing building permits; that wooden houses be built upon brick posts 18 inches from the soil, this space to remain free to the access of air; that no living or sleeping room shall be less than 10x12x10, each to be provided with a fire place or ventilating flue. Forbid under heavy penalty the use of privy vaults, and of closed fence round the lots; that where a connection with the sewer is impracticable to use closets with pails when they can be easily removed by the scavenger. To institute strict police supervision over the sale of meats, vegetables and fruit; to prevent the use of the commodities when partly decayed.

2. Appoint as city physicians men of ability and experience, who will give *all* their time to the practice among the poor; to co operate with the health officer in abating nuisances; enforce cleanliness in and about the houses and teach the people the importance of personal cleanliness, how to live, how to nurse the sick, etc. They should investigate into every case of abortion, of still-birth and trismus, with a view to prevention.

3. Make it a crime to harbor any sick person if they fail to call for medical aid.

4. Punish every person convicted of practicing medicine or mid-wifery, without license, to a long term at hard labor.

5. Require, under penalty, that every physician and midwife shall report every birth, every death and every contagious disease to the authorities.

The most frequent forms of diseases of the eye are those located in the mucous membrane of the eyelids, (conjunctiva). When left alone they are not only a fruitful source of annoyance and suffering, but they often endanger the existence and usefulness of the eye as an organ of sight. The frequency of these external affections of the eye has made their treatment one of the richest mines for quacks from the oldest times. All practitioners of medicine being called upon to treat these diseases, especially those in the country recognize from the formula of Palpebrine a product of no untried remedies, but entirely reliable in the treatment of external eye diseases. The Dios Chemical Co., of St. Louis, Mo., will mail free sample and literature on application.

Clenical Report of Cases Treated at Bellevue Hospital and Dispensary O. D. P., and the Practice of Dr. S. B. Minden, Assistant Attending Physician.

Case No. 1.—Annie E., aged 28, presented herself for treatment. She complained for a period of two years of constant pain, commencing three days preceding her menstrual flow, usually lasting until the flow was established, and sometimes continuing with varying intensity throughout the menstrual discharge. At present she complains of a sharp, fixed pain over the pelvis and down the loins which I diagnosticated as neuralgic dysmenorrhœa. Treatment: Ammonol tablets, grs. 5, one every three hours, and told patient to report in two days. On her return she informed me that "those flat pills worked like magic. After three were taken I found myself free from pain." She has menstruated twice since without pain, and the stimulating effect of Ammonol on the heart has improved her general condition very materially.

Case No. 1.—John M. K., aged 55, an intelligent man, book-keeper by occupation, complained of a variety of headache; for the most part circumscribed, coming on in paroxysms, and always attended with sickness and affection of sight, and other nervous phenomena. He said, "Doctor, my disease is hereditary. My father and two of my brothers are afflicted with it. I have been to a great many physicians, and now try Bellevue Dispensary. I have taken almost a hundred kinds of medicines, among them being arsenic, belladonna and strychine, zinc and iodide and bromide of pot. quinine, antipyrine, phenacetine and antikamnia; but I must say that I have not derived any benefit from them, and am constantly getting worse." We thought this a good subject to try the new analgesic, Ammonol-Salicylate. Tablets, 5 grs. each were prescribed. He was directed to take two tablets every two hours during a paroxysm, and then one three times a day. It is now three months since he had migraine, though at no previous time was he free from sick-headache for more than six or seven days. The drug was retained by his delicate stomach and seemed even to stimulate his digestion. We are now treating his brothers, the eldest Willard, aged 40, having become a morphine fiend. He does not improve so well as the youngest brother, Hormer W., aged 26, who has only taken Ammonol two weeks, and is now free from pain.

Sometime ago called to attend a gentleman who complained of fatigue and pain in certain of the muscles of the right hand and forearm which come on shortly after the patient has begun to write. This condition increased slowly until the pain became so severe that he was compelled to desist altogether; in fact he had to give up a good position, as his penmanship was getting tremulous and jerky. I found the extensors and flexors of the index finger and the interossii of the second and third fingers and also the thumb to be slightly paralytic, and the deltoid seemed to be more or less involved. Treatment: The patient was made to exercise the interossii by separating and approximating the fingers rythmically with a continuous current applied to the nerves and enfeebled muscles. Ammonol, grs. 5, *tid* was prescribed, and after two weeks he began to improve rapidly and is still under treatmemt.

Another interesting case was one of "La Grippe" and a well marked one at that. The temperature being 104° on my first visit. I tried the antipyretic Ammonol; 5 gr. tablets were ordered, one every three hours in 3½ ozs. whiskey. On my second visit temperature was 103°, skin dry, eyes bloodshot, tongue glazed; excessive thirst, great discharge per nostrils; told to continue medicine with some liquid beef. Next day the patient's temperature was again 104° which I found was due to the parent's over-feeding him. His temperature and all symptoms subsided by the seventh day under the continuous use of Ammonol.

Phenols in the Urine and Digestive Auto-Intoxications.

Amann in the Edenburgh Medical Journal, points out the importance of testing the urine in the diagnosis of abnormal digestive processes and auto–intoxications due to bacterial decomposition. It is a remarkable fact that the latter, caused by anærobic bacilli, leads to the formation of powerful antiseptics. The toxalbumins and ptomaines cannot as a

rule be discovered as such, but other decomposition products, such as phenols, can. Albumin and albuminoids contain the benzol radicle, and tyrosin (paroxyphenyl and amido-proprionic acid) is a constant decomposition product; but this rarely appears as such in the urine, first breaking up into simpler bodies. These are aromatic oxyacids, of which paroxyphenyl-acetic acid ($C_8 H_8 O_3$) is the most important, and phenols and cresols, the latter being formed from the acids by loss of CO_2. Thus $C_8 H_8 O_3 \equiv C_7 H_8 O$ (cresol) $\times CO_2$. As a rule urine containing a large quantity of oxyacids contains also a large amount of phenols; but the contrary sometimes is found. The phenols are almost always combined with sulphuric acid, especially as potassium phenolsulphate and cresolsulphate. In the presence of mineral acids they are decomposed into phenol and cresol and $KHSO_4$, by which means the sulphuric acid combined with phenols can be estimated, and the proportion of phenols themselves deduced. This method requires two titrations of the sulphuric acid, one giving the total SO_3 in urine, the other the SO_3 combined with sulphethereal acids. The normal proportion of the latter to the former in urine is 10:100 ("coefficient of Baumann.") The sulphethereal acids, and therefore Baumann's coefficient, are increased in abnormal intestinal digestion. If, however, the SO_2 in urine is not sufficient to convert all the phenols into sulphethereal acids, as the case with persons on a milk diet and infants, it is necessary to estimate the phenols themselves, as they cannot in that case be deducted from Baumann's coefficient. They are then present combined with other acids, for example, glyceronic from oxidation of glucose, and before estimation must be separated from urine by distillation. Under certain conditions the urine contains other aromatic compounds, such as pyrocatechin, hydroquinone, resorcin, etc., which are also eliminated as sulphoethers. Bodies such as indol and scatol, indoxyl and scatoxyl, are also combined in the urine with sulphuric acid, forming indoxylsulphuric (indican) and scatoxylsulphuric acids. These also are decomposed by mineral acids in the same way as the sulpho-ethers, so that the SO_3 they contain influences the coefficient of Baumann in the same way as the phenol- and cresol-sulphates. Pigment derivatives of indol and scatol (indigo, etc.,) can be estimated separately. As a rule indoxyl is increased by abnormal processes in the small, scatoxyl in the large intestine, and their increase is parallel with that of the phenols and cresols (exceptions, however are common.) Another important body which appears in putrefactive intestinal dyspepsia, especially in infants, is diacetic acid. The author gives full directions for the detection and estimation of these bodies. A qualitative examination should first be made for oxyacids, sulpho-ethereal acids, phenols, indican, and diacetic acid. If present to any extent, phenols and the coefficient of Baumann should then be estimated quantitatively.

Scarlatinal Diphtheria.

V. Ranks in a very interesting report on this subject, refers to the researches into the occurrence of education in the fauces in scarlet fever. From September 24th, 1894, to August 31st, 1896, 142 cases of scarlet fever were admitted. Of of these 92, or 64.7 per cent., had exudation on the tonsils or so-called scarlatinal diphtheria. Eighty-nine of these cases were examined bacteriologically, and to these 5 other cases occurring in Munich, and also bacteriologically examined, were added, thus making a total of 94 available cases. The author discusses these cases under the following groups: (1) Cases admitted with scarlet fever and diphtheria, and examined at once. There were 67 such cases, with 6 deaths. The streptococus was found alone in 38.8 per cent., the streptococus and diphtheria B. in 47.7 per cent., and the diphtheria B. in practically pure culture is 5-9 per cent. Thus the diphtheria bacillus was present in over 53 per cent. A negative result was recorded in 5–9 per cent. These cases are then compared with primary diphtheria. In 300 or 73.3 per cent. of 409 such cases the diphtheria bacillus and streptococcus were present, and in 75 or 18.3 per cent. the diphtheria baccillus in almost pure culture. Thus the diphtheria bacillus was found in 91.6 per cent., and the streptococcus alone in only 5.8 per cent. In the remaining cases the examination was negative. Thus the bacteriological examination in scarlatinal diph

theria gives different results to that in primary diphtheria, but the fact remains that in Munich the diphtheria bacillus was found in more than half the cases of so–called scarlatinal diphtheria. The simplest explanation is that the scarlatinal angina predisposes to the diphtheria infection. The frequency of pure streptococcus pseudo-diphtheria is not due to the lacunar form of the throat affection. Of the 6 cases which ended fatally, the streptococcus alone was present in 3, the diphtheria B. and streptococcus in 2, and the result was negative in one case. Descending croup existed in 2 cases, one with the streptococcus and diphtheria B. and the other with the streptococcus alone. (2.) Cases admitted with scarlet fever, but in which diphtheria subsequently developed. Here there were 10 cases, and all recovered. In one the dithpheria B. was found in almost pure culture, in 7 the diphtheria B. and streptococcus, and in 2 the streptococcus alone. This is different from the results in the first group, but the numbers are too small to base conclusions upon. It would seem, however, that the resemblance to primary diphtheria is great. (3) Cases with primary diphtheria in which scarlet fever developed later. Of these there were 12 cases and 2 deaths, from pneumonia and nephritis. The bacteriological examination resembled that in true diphtheria. It would appear as if scarlet fever were primary in these cases, the diphtheria being added during the incubation period of the scarlatina, and especially was this so in 2 cases. In spite of all precautions when the scarlet fever appeared in these cases, the infection was conveyed to one or two other occupants of the ward. An incubuation period of twenty-four hours in scarlet fever is possibly, but is very rare. In every case of diphtheria careful inquiry was made as to whether there had been scarlet fever in the family, and when this was the case the child was always placed in the observation ward. (4) Cases in which the infection with scarlet fever and diphtheria occurred in patients in hospital for other diseases. In 2 such cases the streptococcus alone was present. In the one fatal case there was a descending croup.

False teeth are now made from paper, and are said to last a lifetime.

Phenocoll Hydrochlorate.

Dr. Max Olny publishes in No. 12 of the Therapeutische Monatshefte, on pages 676 to 77, the results obtained in a series of experiments with Phenocoll Hydrochlorate, entitled "Phenocoll Hydrochlorate in Acute Arthricular Rheumatism." The remedy was used at the Clinic at Halle, Germany, in sixteen cases of acute arthricular rheumatism in single doses of fifteen grains, 45 grains per day. The writer was very well pleased with its prompt action. In three cases the remedy failed; in all other cases some of which had been treated without success with Sodium Salicylate, it reacted promptly. In cases of recent standing the pain diminished after taking 9 grammes, and complete recovery occurred after taking 21 grammes. The average time of treatment was thirty days. In recurring cases on an average 25 grammes of Phenocoll were required and treatment lasted 33 days.

Of Salicylate of Sodium, however, it was necessary to prescribe 41 grammes in daily doses of 6 grammes, and if only four grammes per day were taken, 49 grammes were required to relieve the pain. When the first mentioned dose was administered, on an average thirty days were required to a case; with the smaller daily dose 46 days were required. Relapsing cases were given a daily dose of 6 grammes, averaging 48 grammes of Salicylate of Soda for a period of 44 days, and 4 grammes per day required 55 grammes and treatment for 39 days.

Better results were therefore obtained with Phenocoll Hydrochlorate than with Salicylate of Sodium. It is necessary to still continue with Phenocoll for a few days after the pains have subsided, giving every second day one gramme to be taken in the morning and evening. If after a period of seven or eight days no relapse has occurred, which cannot be entirely prevented any more than with Salicylate of Soda, a lasting cure can be depended upon.

The influence of the remedy on the temperature is quite variable. Temperature becomes normal as soon as the affection of the joints has disappeared. Considerable perspirations was observed with weak patients; other side-effects such as cyanosis, collapse, etc., were never noticed.

Effect of Diphtheria Antitoxin on the Kidney.

Siegert has recorded some clinical and experimental observations upon the effect of the subcutaneous injection of Behring's diphtheria antitoxin on the kidney. He finds that after the injections there occurs generally a slight transitory albuminuria and albumosuria; this was found not only in patients already suffering from diphtheria, but also in healthy children in whom the antitoxin was injected as a prophylactic measure. In animals the injection produced similar change in the urine and also a diminution in its quantity and specific gravity. It was suggested that the albuminuria was due to the small amount of carbolic acid in the serum, but this was easily disproved. In some cases acute parenchymatous and hæmorrhagic nephritis occurred in patients treated with the serum, but there was no evidence that this occurred unless some change had taken place in the serum used. Occasionally anuria occurred after the injection, and the same phenomenon was observed in animals. If albuminuria be already present in a case of diphtheria the injection of antitoxin generally causes the albuminuria to disappear without evil consequences. That the alterations in the urine are generally due to mere functional disturbance in the kidney seems to be shown by the fact that even with 10 c.cm. of Behring's serum no organic lesion of the kidney could be produced in rabbits. Siegert concludes that if it can be shown that antitoxin is a specific against diphtheria the usually slight disturbance of the function of the kidney cannot be urged against its use.

The Formation of Diphtheria Toxin.

Kossel has investigated the question of the formation of diphtheria toxin from the points of view of obtaining a potent toxin to be used in preparation of the specific serum, and also with the object of determining whether it is, as Roux and Yersin hold, a secretion product of the bacilli, or, as Gamaleia supposes, an intracellular poison which only appears in the fluid in which the bacilli are grown after some days, and as the result of solution of dead bacilli. He therefore investigated the question of toxin formation during the earlier days of growth, namely, the second, fifth, and tenth. His results, briefly, show that the sterile filtrate of a two-day culture killed in a dose of 0.05 c.cm. per kilo. of guinea pig in three days. Similar quantities led to necrosis, but the animal lived. The filtrate of a five-day day culture killed in a dose of 0.02 c.cm. per kilo. of guinea pig, but the same dose of a ten-day culture was not fatal. The author concludes that the maximum toxicity of a culture is reached in five days. Of a one-day culture, 1 c.cm. per kilo. killed in two days, 0.2 c.cm. led to extensive necrosis, but the animal recovered. Kossel then investigated the question from the other side; he collected large quantities of the pellicle which forms on the surface of cultures in broth, and by a system of washing with 0.5 per cent. salt solution and centrifugalizing, freed them of traces of bouillon until no biuret action was given by the washings. The bacilli were then killed by chloroform vapour, and extracted several days with a few cubic centimetres of a weak alkaline solution. This fluid certainly killed guinea pigs, but since, for example, the bacilli of four culture flasks collected and after preliminary treatment as above, extracted with 14 c.cm. of a 1 per cent. solution of soda, gave a fluid of which 1 c.cm. led to œdema alone, and 5 c.cm. were required to kill the animal in two days, the author concludes that though there is a certain amount of intracellular poison, the greater portion of the toxin is elaborated from the materials of the culture medium by the bacilli within the bodies of the bacilli, but is immediately afterwards secreted.

Diet in Bright's Disease.

Dr. Elliot says: "It is agreed that the most rational diet is a mixed one. The estimate commonly given is that meat should constitute one-fourth and vegetable food three-fourths. This is often overstepped, and the proportion brought to two to four. Such indulgence throws into the circulation a large amount of nitrogenous waste, which it is the office of the kidneys to remove from the system. An increased amount of organic excretives, continually demanding removal, throws a considerable tax upon

these organs, which is frequently more severe by a hyperacid concentrated condition of the urine, as these subjects seldom drink an adequate amount of water. This irritation, if long continued, eventually leads to functional and, finally, organic impairment of the kidneys. To these sources of irritation must be added the deleterious effects upon the renal structure of the excretion of the by-products of faulty gastric and intestinal digestion, frequently present from the dyspepsia so common among those who over-indulge at table."

Diphtheria.

The finding of the Klebs-Loeffler bacillus in normal throats and noses has markedly affected the statistics in a way not usually appreciated. Dr. H. W. Gross found, in the Children's Hospital of Boston, and records in the "University Medical Magazine," that in 314 normal throats, 7.9 per cent. contained the bacillus of diphtheria and the average existence of the organism in the mucous membrane was fifteen days; the shortest time was one day, and the longest time over three months.

The nose was the principal habitat in 65 per cent., and the throat in 35 per cent. These experiments seem to show that diphtheria bacilli, both virulent and non-virulent, are present in an unfortunately large percentage of apparently unaffected nasal and pharyngeal mucous membranes.

It is easy to see that if all cases in which the diphtheria organism is found are treated with the antitoxine, and are recorded as bases prevented, when it is not known whether they, if left untreated, would have contracted the disease or not, the general statistics of cures will be greatly favored. Such cases recorded by Dr. Gross should be especially classified.

Bed Sores,

Bed sores are likely to occur in the patient who is aged, paralyzed, debilitated, or suffering from fever, particularly continued fever, like typhoid; in short, their formation is liable in all cases where the blood is vitiated, or its circulation retarded, and the constitutional powers reduced; pressure, uncleanliness, and moisture hasten their appearance.

To prevent them, keep the patient clean and dry, changing his position whenever practicable; keeping the feet warm assists circulation; keep the under sheet free from wrinkles and crumbs; remove pressure from prominent parts by using air cushions or like appliances.

Soap plaster is sometimes applied to exposed portions, or bathing with bay rum, whiskey, witch hazel, camphor, or vinegar, &c., but the best way is to strengthen the skin's resistance by bathing with alcohol, pure, or with the addition of two grains of bichloride of mercury to each ounce; keep the bottle handy and bathe often—whenever opportunity offers. This treatment hardens the skin, and promotes circulation, and should be commenced at the beginning of illness, before the skin is even reddened. Should reddening appear, apply flexible collodion, or dust with zinc oxide, talcum, comfort, or other good powder after bathing.

Cocaine Anæsthesia.

According to Wölfler, hypodermic injections of cocaine are more dangerous when made in any part of the head than when made in the trunk or limbs. The maximum dose for injection in the mucous membrane of the mouth should be about a third of a grain. A case is reported by Mitchell in which ten drops of a 10 per cent. solution injected into the tonsil caused general tremor and faintness. In anæsthetising the larynx, Stoerk has been in the habit of applying a 20 per cent. solution of cocaine by means of a brush. Yet he has only met with four cases of cocaine poisoning, notwithstanding that occasionally he has had to use comparatively large quantities to produce the required degree of anæsthesia. This is probably due to the small quantity absorbed from the mucous membrane of the larynx. Cocaine is much more readily absorbed from the pharynx and œsophagus. Heyman reports a case in which apathy and stupor with rapid pulse and frequent respirations which lasted for five hours. In many cases Stoerk has used 5 cm. of a 20 per cent. solution, *i. e.*—1 gramme of cocaine to produce complete

anæsthesia of the larynx—and yet he has only seen bad results in four cases. A weaker solution (5 per cent.) is used for painting the interior of the nose, and great care has to be taken to ensure that the fluid does not run into the throat. Stoerk has met with one severe nasal case of cocaine poisoning. A patient of Seifert's, after an application of 1 gramme, was seized with palpitation, rapid action of the heart, vertigo and collapse. He had to keep his bed for a day and a half. Neurotic subjects appear to be very sensitive to cocaine. In slight cases of poisoning there is merely an exaggerated reaction to external impressions somewhat like hysteria. In severe cases there is pronounced pallor of the face, shallow or laboured breathing, and a rapid pulse. In very severe cases there is either faintness and prostration with eventually appearances of collapse, or much agitation with forced movements, hallucinations, and a feeling of anxiety. After the acute stage is past the patients are usually for some time weak, listless and prostrate. They have to lie down for many hours. And they may complain of violent and continued pains in the head. There is no antidote to cocaine. The patient should be laid in the horizontal position. In slight cases of poisoning coffee may be administered, and in some cases camphor, ether, musk injections, or inhalations of amyl nitrite. In Stoerk's first case a severe epileptiform convulsion, followed by faintness which lasted eight hours, was induced by a comparatively small quantity painted on the interior of the larynx. In the second case a large quantity was required. After the operation the patient was seized with epileptiform convulsions. Great prostration for five hours followed, and for days there was faintness and debility. The third was a nose case in which a small quantity of a 5 per cent. solution was used. As in the last case, epileptiform convulsions followed the operation. Afterwards there was agitation, and later faintness. It was several hours before the patient could go home. In the fourth case there was also an epileptic attack with foaming at the mouth followed by signs of collapse. For days he was anxious and very weak, and complained of pains in the head. According to Doufournier, the sitting posture in which the patient is placed during operations on the throat and nose favours cocaine collapse. In none of Stoerk's cases was there a history of epilepsy. Baracr concludes from such cases that cocaine must be cautiously used in epileptics.

The Surgical Treatment of Focal Epilepsy.

Sachs and Gerster, in the New York Medical Journal, gives a critical analysis of the result of operative treatment in 19 cases of focal epilepsy. The term "partial or focal epilepsy," is made to include not only the cases of traumatic origin, but also those in which localized convulsions are associated with other diseases, more particularly with early infantile cerebral palsies. The authors who in 1892 published a somewhat gloomy view of the results of the surgical treatment of focal epilepsy now state that they have gradually been convinced that if the cases for operation are selected more carefully, and if the surgical technique is perfected, the prognosis need not be stated quite so gravely, and that it is possible not only to relieve many, but to cure some of the cases of epilepsy. The following conclusions are drawn from a consideration of the clinical histories and the results of the 19 cases in which operative treatment was practiced by Gerster: (1) Surgical interferrence is advisable in those cases of partial epilepsy in which not more than one, or at most two, years have elapsed since the injury or the beginning of the disease which has given rise to the convulsive seizures. (2) In cases of depression or other injuries of the skull, surgical interference is warranted, even though a number of years have elapsed; but the prospect of recovery is brighter the shorter the period of time since the injury. (3) Simple trephining may prove sufficient in a number of cases, and particularly in those in which there is an injury to the skull, or in which a cystic condition is the main cause of the epilepsy. (4) Excision of cortical tissue is advisable if the epilepsy has lasted but a short time, and if the symptoms point to a strictly circumscribed focus of disease. (5) Since such cortical lesions are often of a microscopical character, excision should be practised even if the tissue ap-

pears to be perfectly normal at the time of operation; but the greatest caution should be exercised in order to make sure that the proper area is removed. (6) Surgical interference for the cure of epilepsy associated with infantile cerebral palsies may be attempted, particularly if too long an interval has not elapsed since the beginning of the palsy. (7) In cases of epilepsy of long standing, in which there is in all probability a widespread degeneration of the association fibres, every surgical procedure is useless.

Pharyngeal Cough in Children.

René Millon (Clinical Journal) believes that nearly one-fourth of the children who cough are affected with a pharyngeal rather than a bronchial cough. This is characterized by repeated attacks of coughing, which at night, when they are most frequent, may last as long as ten or fifteen minutes; in the daytime they usually follow rapid action, or fits of anger or crying; at night they are especially apt to occur at bedtime, at midnight, and upon awakening. A glairy mucous is produced in the throat, which may be removed by the fingers in young children and which older children may cough up, but which is usually swallowed. It is long, viscous, sometimes thickened; it may be streaked with blood if the attacks of coughing are long and violent. Nausea and vomiting are sometimes caused by these attacks. Medication, other than topical, has little effect. The cough does not, as a rule, affect the general health. This condition is not accompanied by any tracheo-bronchial symptoms perceptible to the most careful auscultation. In the throat will be found the signs of chronic pharyngitis. The amygdal tonsils may be enlarged.—Pharyngeal cough is easily diagnosed when it exists alone, but when it is combined with bronchitis it is difficult to decide to which affection the cough is due. When pharyngitis is combined with pertussis we should give both local and general treatment. Resorcin, five per cent., may be applied to the pharynx. At the termination of the whooping cough the pharyngitis should receive especial attention, as it may prolong the cough indefinitely. Applications of iodized glycerine are excellent. In the treatment of uncomplicated pharyngeal cough, resorcin, in a fifty to a hundred per cent. solution, may be applied, but equal parts of glycerin and iodine are better. These applications should be made twice, or at most three times, a week. Older children may also gargle a solution of chlorate of potash morning and evening. The cough will disappear more promptly than the lesions.

The Commencement of Diabetes Mellitus.

Very little is known of Diabetes in its earliest stage, according to Dr. Loeb. When the patient first seeks medical advice, it is generally on account of some definite symptoms, and the urine is then generally found to contain a large amount of sugar (1 per cent. or more). The patient often states that he has suffered from the symptom of the disease for a certain definite period only. But the author records cases which show that these statements are often unreliable, and that the disease may first begin as a slight and temporary glycosuria. In one of Loeb's cases the urine contained 5.3 per cent. of sugar, the specific gravity was 1038, and there was a history of thirst of only fourteen days' duration. But the author happened to have examined the urine two years previously whilst the patient was suffering from an attack of intercostal neuralgia. At that time 0.25 per cent. of sugar was present, but this had disappeared at the end of nine months. Hence long before the well-marked symptoms of diabetes had developed, there was a diminished power of utilising carbohydrates in the system, and slight temporary glycosuria as a result. In a second case of diabetes the urine contained 7.9 per cent. of sugar, and had a specific gravity of 1042. The patient stated definitely that symptoms of the disease had been present for four weeks only. But the author happened to have made an examination of the urine five months previously, and at that time had found traces of sugar present. In a third case of diabetes the urine contained 4 per cent. of sugar. The author had found traces of sugar in the urine two years and a quarter previously. In a fourth case, for four years and a-quarter the author has found trace of su-

gar in the urine from time to time. On one occasion the sugar excretion reached 0.38 per cent. The author concludes that in a great number of cases of diabetes, for a long period—often for years—before a large quantity of sugar is excreted, and before the characteristic symptoms of the disease appear, small quantities of sugar are excreted in the urine temporarily. During this period the patients are quite well, and, having no cause to consult a medical man, the opportunity of detecting this slight and temporary glycosuria seldom occurs. The author, of course, admits there there is not this gradual onset in all cases. He admits that there are cases which are very acute, cases in which a large quantity of sugar is found in the urine from the first. The author thinks that the temporary occurrence of a small quantity of sugar in the urine ought not to be regarded lightly. The cases above recorded show that sometimes it is followed by severe diabetes. On the other hand, some of the cases recover completely, and the author adds an example of this—a case of slight and temporary glycosuria—which he has followed for four yeors and a half, and which has finally ended in recovery.

The Dangers of Carbolic Acid.

Von Stuhlen, in the Medical Times and Hospital Gazette, draws the following conclusions from his investigations of the subject, carbolic acid is a more dangerous drug than members of the medical profession usually believe: (1) Its use and that of allied disinfectants are responsible for shattered health and deaths, but more often is death produced than serious chronic illness. (2) Most accidents are due to carelessness, usually through the careless setting away of the poison, so that a mistake is easily made by exchanging it for other medicines or liquids. (3) Medical poisonings occur very seldom, and when they do occur are usually due to the use of solutions of too great strength. (4) Children and weakly persons are very susceptible to the poisonous actions of antiseptics, particularly to carbolic acid poisoning, and in these patients it is possible that the usual strength of the solution may produce bad effects. (5) The application of carbolic acid to mucous membranes in large quantity is very dangerous, on account of the rapid absorption which takes place—above all is the use of carbolic acid, even in small quantities, dangerous as an injection. (6) It is well to be somewhat sceptical as to the absolute immunity from poisoning by the newer antiseptics. There is no absolute proof that they are perfectly harmless ; in fact, a few cases of accidents have already happened through them. They are, however, as a rule, much less dangerous than carbolic acid. (7) The autopsies in cases of poisoning by the above mentioned antiseptics were not very satisfactory. With regard to these conclusions, we must say that we are entirely at one with Von Stuhlen in his opinions, and quite agree that there is good reason to be more careful in using not only carbolic acid, but many other and newer antiseptics. Possibly the accidents arising from the use of carbolic acid are in great measure, due to its universality, and the fact that it is so well known to the lay public. Familiarity with its action, its antiseptic and disinfectant powers, has bred contempt for its dangers as a poison not only amongst the ignorant public but even amongst medical men, and we are not sure that a more stringent regulation of its sale would not be productive of benefit to the community. It is lucky that the uses of corrosive sublimate are not also well known.

Diet in Phthisis.

If, as is the case with many, the stomach will not work, it must and can be made to do so. It is absolutely necessary that an abundance of nitrogenous food should be digested and assimilated, for it is to this food alone that we must look for material to restore the diseased tissues. The sppetite must be roused to the point of taking meat with a relish This can be done even in those cases where there is great disgust for food. and where, apparently, no meat is digested.

The day is past when such advice as "eat anything you want, and plenty of it," can be given to such a case with safety. Let us have a reason for what we do. Let us feed our patient according to well-known physiological laws, and with a scientific and accurate knowledge of what and how much he needs. It does not

make one particle of difference whether the bacilli are found in the sputum or not. Whether the case is tubercular, hereditary, a result of the influenza, or what is the cause, the fact is that he responds to treatment just as quickly in the one case as in the other. Pay no attention to his plea that he "cannot eat meat." Put him at once upon a diet of broiled beef pulp and hot water, exclude all other foods and drinks, and wait for your results. It will not be long before the stomach accepts the terms offered, and goes to work in earnest; the appetite returns, and then the trouble is to keep the patient from eating too much.

The exclusive beef diet is to be kept up till the urine is clear and free and the appetite good, when a gradual enlargement of the diet along the line of whole meats, eggs, and bread may be carefully entered upon. Fats and starches should be used carefully at first, till they are readily digested without acid fermentation. The cereals may be used when well cooked, but vegetables are best avoided. All deserts, sweets, made-dishes, and fried foods should be avoided. Meats are best used freshly broiled or roasted.

The Malaria Parasite.

The etiology of malaria has been a good deal discussed during the year, and, although it cannot be said that we have learned anything very new in regard to it, such knowledge as we possessed has undoubtedly been brought to a point and made much clearer, and the gaps in our knowledge have been indicated with much precision in the admirable Gulstonian lectures delivered by Dr. Patrick Manson. He has especially concerned himself in showing (1) that the malaria parasite can not only exist outside the body quite independently of man, but that it can go on multiplying there indefinitely. As he says, we know that malaria abounds in tropical wildernesses where man is never seen, therefore we are forced to assume (2) that man is in no way necessary to its existence. Is, then, the intrusion of the parasite into man a mere accident? To this he answers emphatically, No! and says (3) that man must be looked on as an alternative host. But that being so, it becomes necessary to assume that, as provision is made for the entry of the parasite into the body, so provision must be made for its exit, and (4) such provision, he maintains, can be found in the operations of certain suctorial insects common in the hot, damp regions where malaria prevails—the mosquito theory. What Dr. Manson believes to be the life history of the malaria parasite, then, is shortly this: it is really a parasite of the mosquito, passing from one individual and one generation of mosquito to another, owing to the fact that the larvæ of this insect devour the dead bodies of their parents, and thus in turn become infested with their their parasites; but when swallowed by man in water, as so many disease germs are, or when breathed, from the ponds drying up and the plasmodia in the larvæ, or those scattered about in the water, passing into a resting stage and rising in the air in the form of dust, it may find its way back to the human host from whom its ancesters had started many generations back. These lectures have given rise to a considerable amount of discussion and of criticism.

Operative Treatment of Facial Neuralgia.

Tiffany publishes in the annals of surgery an analysis of 108 cases of facial neuralgia treated by intra-cranial operation. Of these nearly two-thirds were subjected to the Hartley–Krause method, and nearly one-fourth to that of Rose. Of these cases 24 were fatal, including one in which the patient died three months after the operation from cerebral abscess. Shock and sepsis, it is shown, are the chief causes of death. The author, in discussing the result of surgical treatment in the cases of recovery, asserts that intracranial exeision of branches of the fifth nerve relieves pain, certainly for a time, and perhaps permanently; but pain may recur, possibly in the territory subject to the excised branch, possibly in other branches. Resurrence of pain after known removal of the ganglion of Gasser is not recorded. The expediency of removing the whole of the ganglion is questioned. The first branch, it is stated, is never affected alone, and trouble of one kind or another in the eyeball has been often met with after removal of the first division of

the fifth nerve. It is well, in the author's opinion, not to take away the upper portion of the ganglion and the first branch, but rather to remove the second and third branches with the corresponding portion of the ganglion. The following suggestions are made with the object of assisting the surgeon in his decision with regard to the necessity of a central operation in a case of facial neuralgia. An intracranial operation is indicated if more than one branch of the fifth nerve is affected; if the painful area receives filaments from the branches near their exit from the head; if the pain is not the expression of a constitutional disorder; if a cause central to the ganglion does not exist; if other measures have failed to give relief. The intracranial operation which should be done is removal of the lower two-thirds of the Gasserian ganglion, together with the second and third branches as far as their foramina of exit from the skull, all in one piece, so as to be certain of the amount of tissue taken away.

Roentgen's Rays in Gunshot Wounds of the Head.

Schure relates in the Edenburgh Medical Journal a case where by means of the Roentgen rays it was possible to prove the presence of a bullet in the brain, and approximately to localise its position. A man, aged 27, had a gunshot wound five years ago, just above the outer end of the superciliary ridge on the right side, followed by unconsciousness. No exit wound was to be found. Later, amaurosis in the right eye, swelling and prominence of the eyeball, and dilatation and immobility of the pupil were observed. The right face was anæsthetic. The bullet was thought to be present in the orbit where a large blood effusion had taken place. The bullet could not be found there, but the inner and upper part of the orbital wall was ascertained to be splintered. Five years later there was complete paralysis of the right fifth nerve except its motor branch, and paralysis of the olfactory and optic nerves. Buka took a Roentgen photograph of the head. A shadow of 5 mm. in diameter, 18 mm. from the root of the nose and 8 cm. from the back of the skull, was distinctly seen. The position of the bullet was somewhere in the neighbourhood of the right Gasserian ganglion. If a photograph could have been taken immediately after the injury the exploration of the orbit would have been found to be unnecessary. A fracture of the base of the skull must have occurred, and thus the paralysis of the optic and olfactory nerves was brought about. Perhaps an operation undertaken immediately after the accident might have relieved the pressure on the trigeminal nerve, and thus also the paralysis.

Nail Biting.

For a number of years a distinguished French physician, Dr. Berillon, has been making observations pertaining to the habit of finger nail biting. The facts which he has gathered show that the habit is a result of a diseased nervous system. He examined the pupils in a number of schools. The habit is much more frequent among girls than among boys. In some schools 50 per cent. of the girl pupils had the habit. It was noted that the nail biters were the poorest students. The habit prevails most frequently between the ages of twelve and fourteen. In most cases it is hereditary and associated with moral depravity, The most incorrigible pupils were found invariably to be nail biters. It is not a wilful habit to be cured by some little punishment, but an indication of the first stage of nervous degeneration. The habit should be treated as a disease. It affects the general health greatly. Proper food and exercise are important factors in curing the habit.

Cocaine Poisoning: Magnan's Symptom.

At a meeting of the Neurological Society of Moscow, Prof. Rybakoff, insisted on the diagnostic value of the sympton of chronic cocaine poisoning described by Magnan. This is an hallucination of common sensation. The patient complains of feeling some foreign body under the skin. In some cases the foreign bodies felt were like grains of sand, in others slightly larger; generally they were described as more or less rounded, and gave rise to complaints of microbes, worms, crystals, etc., situated just under the skin.

While other symptoms of chronic cocaine poisoning occur also in alcoholism and with other poisons, Magnan's symptom seems to occur only with cocaine. It has therefore a real diagnostic value, especially in cases where the patient is unwilling to admit having used cocaine. Where cocaine is extensively used in surgery and dentistry, the appearance of Magnan's symptom is a valuable indication for the immediate cessation of the drug, Korsakoff reported a case in which a woman, suffering from multiple neuritis complained of "worms in the skin." On inquiry it was found that vaginal tampons containing cocaine had been freely used. The omission of these was followed by amelioration of the symptom.

Nature's Method of Vaginal Antisepsis

Prof. Lusk, according to Modern Medicine, expresses himself as strongly opposed to the vaginal douche, before and after parturition. While the vaginal canal abounds in micro organisms, he considers that they only intensify the acid reaction of the vaginal secretions, and render the latter especially unfavorable to the multiplication of the streptococcus, which is the germ that produces puerperal septicemia. The normal vaginal secretions furnish a soil hostile to all forms of cell growth. The cervical canal of the pregnant woman is protected from the invasion of micro-organisms by a mucous plug, and thus in natural labor the protection of the uterine cavity is complete. The entire parturient act, furthermore, serves to guard the woman against infection. With the rupture of the membranes the downward current is produced by the escape of amniotic fluid. The descent of the child cleanses the vaginal canal, and the associated leucocytosis and increase of vaginal secretion are inimical to the action of the septic germs. Finally the passage of the placenta completes the toilet of the vagina.

The fact that nature provides this excellent means of self-defense clearly shows that the disturbing methods of disinfection employed before and after labor, under the plea of prophylaxis, are not commendable. The antiseptic douche dissolves the mucous, sets free the imprisoned germs, weakens the resistance of tissue, and contributes to the extension of the source of infection.

The Treatment of Constipation.

Dr. T. Lauder Brunton (London Lancet) regards this symptom as the reaction of a healthy organism to unfavorable surroundings, viz., too soft food, too little water, or too little exercise. For the first, one may advise bread, either made of the whole grain or with more or less bran; vegetables in abundance, either cooked, as spinach, cabbage, broccoli, Brussels-sprouts, cauliflower, carrots, turnips, parsnips and the like. or raw, as tomatoes or celery. Fruits are of advantage—melons, apples, oranges, and figs. When stewed prunes are inefficient in keeping the bowels open, some senna leaves may be tied in a bag and placed in the receptacle in which the prunes are to be stewed. This plan has often been successful when the ordinary stewed prunes have failed. Sugars in themselves are useful laxatives. A favorite addition to the breakfast is marmalade which contains vegetable salts, sugar, and also the hard skin of the orange cut into small pieces, which are rather indigestible and give a mechanical stimulus to the bowel. Water insufficient in quantity or abnormal in quality is a cause of dryness of the bowels which results in constipation, which may be lessened by the taking of a tumblerful of hot or even of cold water on rising in the morning and on going to bed. For waters from a chalky soil, some of the bottled waters, soda, potash, or aërated water, should be substituted. The habit of evacuating the bowels at a certain time should be formed—at night if the patient suffers from hemorrhoids. Exercise is of advantage; massage, and rubbing the bowels in the direction taken by the hands of a watch, are also useful. In delicate women, especially those suffering from ovarian or uterine trouble, exercise may be harmful. Open-air defecation causes a stretching of the floor of the pelvis and affords support to the fecal mass as it is forced backward by the action of the abdominal muscle. This can be imperfectly imitated in the closet by the patient leaning forward to an acute angle. In some cases hydropathic treatment is useful—wet compresses to the

abdomen two or three times daily, and sitz baths, cold in summer and with the chill taken off in winter.

Meddlesome Midwifery.

Dr. J. R. Bromwell (Transactions of the Washington Obstetrical and Gynecological Society).

That there are conditions defying Nature's forces to accomplish the birth of the child unaided we all know, and for this reason midwifery practice occupies the place which it does in general medicine. It is also true that parturition is a normal physiological process and rarely needs more skilful management than that usually given by a patient and intelligent midwife. Notwithstanding this, it is my opinion that the use of the obstetric forceps is growing, needlessly and unnecessarily, and that we have forgotten the teachings of years gone by, "to beware of meddlesome midwifery." Give Nature time to accomplish her work before aiding the labor by instrumental interference. There is a wide difference in accomplishing an act slowly but surely and not being able to accomplish it at all. Time is one of the least factors to be considered in determining your treatment of the three stages of childbirth. The condition of woman or child, or both, is the important consideration. Your desire to speedily end the labor, that you may fill another pressing engagement urging you away from your patient's bedside, is not to be considered. Are the forceps used many times now where they were used very rarely years ago? I think so, and would ask you if the comparative results justify this use. Are there not other means to alleviate the pains of the parturient woman and assist Nature in her efforts to complete the labor, other than forcibly dragging the child into the world, often before the parts are ready for its passage—the only excuse being that labor has lasted twenty-four or thirty-six hours?

Are we not making too frequent vaginal examinations? The condition having been ascertained to be normal, diognosis of position made, and degree of dilatation of the os known, is it necessary to annoy and often endanger the health or life of the woman by frequent examinations, often prompted by our own impatience? Are we not often rupturing the membranes too soon; and are we not leaving our cases in the care of nurses, telling them only to send for us when they are sure of a speedy completion of the labor? Is this not leaving them to act for us, and by our commands, in one of the worst forms of meddlesome midwifery, as they can only ascertain what we require them to know by unskilled, frequent examinations?

The second stage completed, are we not in too great a hurry to cut a pulsating cord and forcibly express the placenta, or in introducing the hand to remove it? Would it not be more scientific to wait a reasonable time for its separation and expulsion, and allow nature to complete the third stage as well as the first and second? Is not any interferance with a normal labor or any other, aside from assisting Nature should she flag in her efforts toward its completion, unless demanded by threatening danger to mother or child, meddlesome midwifery?

Are we not, in our great haste, losing sight of our obligation to consider the interests of the mother and child as paramount to all others, no matter what outside interests suffer by our detention by the bedside? From the time we enter her room and take charge of the case our duty is to her and her unborn child only. Needless hurrying the labor, or leaving too soon after the birth of the child, violates that obligation.

The Antitoxin Treatment of Diphtheria.*

Numerous authors have pointed out—that the percentage mortality as applied to serum treatment, forms a most misguiding basis for calculations, if only because every sore throat however mild from a clinical point of view—in which a single Clebe-Loeffler bacillus has been detected, has been included in the list as a case of diphtheria. Kassowitz and many others have shown that in but few cities has the gross mortality from this disease been actually decreased.

Whatever the general gravity of an epidemic of diphtheria may be, the malady is admitted to be particularly serious when it attacks children under five years of age, so that a comparison of the gravity of the cases is not to be obtained by differences

*Lennox Browne, Abstract.

of numbers at this period in the serum and non-serum treated cases, but by the proportionate death rate in each class at those years of life in which "the fatality of diphtheria is so notorious:" that, in point of fact, no case under five years of age can ever be said to be mild. The following figures illustrate the position :

1894.—Prior to antitoxin,	1171 cases.	Deaths,	556—47·4 p.c.
1895.—With "	1013 "	"	379—37·4 "
1895.—Without "	440 "	"	118—26·6 "

Thus the mortality of cases treated witout serum under five years of age in the metropolitan fever hospitals in 1895 is more than 20 per cent. less than that of those treated under the same conditions in 1894; and more than ten per cent. less than that of the serum treated cases in 1895.

After all, it must, however, be candidly acknowledged that the serum treatment has received the approval of many eminent authorities. On the other hand, the following long, but by no means exhaustive, list demonstrates how numerous and various are the centres of observation that have furnished writers of repute who express themselves as definitely adverse to the treatment.

Armstrong, New York; Benesch, Austria; Bergmann, Berlin; Bernheim, Berlin; Canon, Berlin; Coakley, New York; Elmer Lee, Chicago; Ernst, New York; Fürst, Berlin; Gayton, London; Gerloczy, Buda-Pest; Glaser, Hamburg; Gottstein, Breslau; Hagenbach, Basel; Hansemann, Berlin; Heller, Nürnberg; Kassowitz, Vienna; Kohts, Strasbourg; Kraske, Freiburg; Kretchmann, Munich; Krobrynsky, Kolomea; Krückmann, Neu Kloster; Lahs, Marburg; Langerhans, Berlin; Lebreton, France; Leichtenstern, Kota; Macintyre, Glasgow; Magdelaine, France; Mundorff, New York; Oertel, Munich; Perrigaux, Paris; Rosenbach, Breslau; Schleich, Breslau; Soerensen, Copenhagen; Soltmann, Leipzig; Springorum, Magdeburg; Stowell, New York; Struck, U. S. A; Variot Paris; Vissman, New York; Vulpius, Karlsruhe; Wendlstadt, Kota; Winters, New York; Zappert, Vienna.

This list—mainly taken from abstracts published for 1894–95–96—does not include the large number of observers who have had to admit that the serum treatment is accompanied by complications, and is responsible for sequelæ, some of which have increased the fatalities from the disease beyond that which was formerly observed under the older methods of treatment; for instance, cardiac failure (Baginsky), hæmorrhagic nephritis (Soerencen), albuminuria (Oertel, Hansemann, Benda, and Siegert), and petechiæ and fatal gastro-enteritis (Hagenbach); while other accidents, not always fatal, have been responsible for undue retardation of complete recovery,

To this list also must be added many observers—*e. g.*, Klebs, Fraser (Edinburg), and Kortright—who, believing in the value of the serum when administered for the cure of the actual disease, have failed to support, or have withdrawn their adhesion to, the immunizing power of the serum when administered for proyhlactic purposes—albeit, as Behring himself has put it, "the possibility of cure depends on the possibility of immunization."

As an instance of how enthusiasm may blind observers to facts, the ratio of cases failing to be protected against the disease when immunization has been practised to any appreciable extent is alone sufficient to demonstrate its futility.

For example, Kassowitz reports that in Halle, of 125 immunized children in the clinic, 3 caught diphteria, whilst of 50 others in similar circumstances, and not immunized, only 1 was affected. This author pertinently observes that where the disease itself cannot prevent a second attack, it would be curious if an artificial substance would do it.

I have no desire to press home too hardly the danger of an immediately fatal result of serum injection, of which an appreciable number of cases have been reported; but such a risk is alone sufficient to condemn a prophylactic administion. Many other cases of alarming but not always fatal collapse are also recorded, where the remedy has been applied to the disease; and it is but fair to assume that to the injection, *per se*, many deaths should be attributed.

It has been largely claimed that the great advantage of the serum treatment is that it is founded on a scientific basis; but from whatever practical point of view we may consider this dictum it is difficult to see the grounds on which it can be sustained.

For example, it has been advanced that antitoxin counteracts the disease caused by the Klebs-Loeffler bacillus; neverthe-

less this organism is to be found for weeks and months after the membrane—the result of the bacillus—has entirely disappeared. The membrane itself has not been shown to separate more speedily under serum injections than by former methods of treatment; nor, finally, have the typical complications and sequelæ of the systemic toxæmia been less severe in the antitoxin cases.

On this point Sternberg, an ardent advocate of serum therapy, while expressing the opinion that "the experimentnl and clinical evidence heretofore submitted appears to establish the value of the treatment when applied before the disease has progressed too far," says "it must be remembered that the antitoxin has no power to destroy the diphtheria bacilli, or to relieve the suffocation resulting from obstruction of the larynx, or to cure an acute parenchymatous nephritis due to the action of the deadly toxin elaborated by the Klebe-Loefler bacillus." May we not well ask what does the antitoxin cure.

On the other hand, on the first introduction of serum injections, we were told by Roux and others that all supplementary treatment, either local or general, was harmful to the success of the serum; but there is now hardly one advocate, however enthusiastic of antitoxin, who does not supplement it by the use of germicidal solutions—*e. g.*, corrosive sublimate—of a concentration of almost infanticidal intensity—to assist in destroying the bacillus; and of sprays, as of sodium carbonate of lime water, for assisting the separation of the membrane. In the same way, perchloride of iron continues to be administered internally to correct the deterrioration in the quality of the quality of the blood; quinine and strichnia to combat the degeneration of nerve structure; and alcohol to counteract the systemic asthenia, all specific characteristics of the malady.

Nor, if we continue the scientific basis of the treatment from a bacteriological point of view, can we admit that anything like a fair proportion of the cures attributed to its use is due to impregnation of the serum with the specific toxin, seeing that the Klebs-Loeffler bacillus is only to be found alone in less than ten per cent. of the cases; and that is only this class—according to some of its apostles—should the serum be administered. Indeed, no less an authority than Loeffler, himself only a moderate supporter of antitoxin has said that "coccal infections cannot be favorably influenced by serum."

Results of the Pathologic Anatomical Examination of the Ear in Measles.

F. Bezold after carefully conducted examinations for a number of years arrives at the following practically important conclusions: (Pediatrics Oct. 1, '96.) In not one case of death from measles was there missing at the autopsy a muco-purulent or purulent secretion in the temporal bones. With the exception of one case, where the process existed before the contraction of measles, there was present fresh inflammatory processes, confined in one case only, to the bony tube, in two cases to the tube and the floor of the tympanum. In all other cases there were collections of secretion, redness and swelling covering all the cavities of the middle ear. A spontaneous perforation of the drum membrane is not often produced by the otitis of measles. Injection of the vessels was slight, irregularly distributed and occasionally punctiform. The destruction of the drum membrane and the auditory canal occur more seldom, probably on account of the more protracted course of the inflammation, than we find in other forms of otitis, notably that occurring in scarlet fever. The otitis of measles is to be looked upon as an integral part of the systemic infection, and does not arise through extension from the nose into the Eustachian tubes etc. In the greater number of cases th pus is again absorbed without having caused perforation of the membrane, or any injury even to the hearing. In a few cases the exterior of the drum membrane does not show any changes, but usually it is somewhat darker, and particularly in the posterior upper quadrant is of a diffuse livid-red color. Masses of pus may shine through in the intermediary zone of the posterior half, giving it a yellowish color, and usually it is slightly bulging here. Besides this, single radiating vessels are frequently seen, and in single cases a sinking of the drum membrane is observed. The surface becomes successively dimmer, often wrinkled, and on greater saturation by serum or thin liquid

pus, raised vesicles are noticed. If a perforation takes place from the middle ear, the secretion will continue days or weeks. The perforation is seldom large, and always closes up again. With good treatment, hearing is restored even in the perforative form. In comparison with the forms of otitis which complicate other infectious diseases, the one appearing with measles is to be considered of a relatively mild character.

Gastro-intestinal Septicemia.

J. Comby in the Medical News says that this disease is not uncommon in infants, but that it is somewhat rare in children a few years old. It does, however, occur, and he has himself seen a number of well-authenticated cases. The predisposing causes are a defective condition of the digestive tract and rachitis. Sex has no influence, nor has season. The disease does not appear to be contagious, and is in reality an acute auto-intoxication. The infective agent may possibly be the bacterium coli communis which has become virulent in its action. The symptoms are at first those simply of indigestion— colic, vomiting, and diarrhea. Fever and even delirium follow, the gastric symptoms continue and become more severe, no food is tolerated, and the stools are diarrheal and horribly fetid. Urine is scanty and may be suppressed. In thirty-six to forty-eight hours the child may be in a hopeless condition and the prognosis is very grave. The diagnosis is difficult: simple indigestion is thought of at first, but the symptoms soon become too severe to allow of that diagnosis; poisoning is suggested, but is rarely substantiated; Asiatic cholera is closely simulated, with the exception of the rice-water discharges; typhoid fever is more insidious in its onset and is usually marked by headache, insomnia, and constipation rather than by vomiting and diarrhea; tuberculous meningitis begins with cephalalgia, vomiting, and constipation: intestinal tuberculosis occurs in children who have long been in an invalid condition; grippe may in every particular simulate the disease under consideration, and can only be excluded by the absence of an epidemic; in pneumonia the vomiting, which often occurs at the onset, ceases after the first day and is not followed by diarrhea. By a process of exclusion, therefore, we are enabled to make our diagnosis, and should then institute a prompt and vigorous treatment. The stomach must be given absolute rest, but thirst may be relieved by pure or slightly mineralized water, to be taken in small amount and with the addition of pieces of ice. Should the vomiting not cease the stomach must be washed out with a borated solution of Vichy water, to temporarily disinfect it and remove the products of fermentation which have accumulated in it. Intestinal irrigation with boiled water must be done several times a day, to be followed by a nutritive enema of

Dry peptone	ʒ 1½ to 2½
Yolk of egg	1 or 2
Tepid milk	ʒ ij.
Sydenham's laudanum	gtt. ij.

Subcutaneous injections of artificial serum may also be given to restore water to the organism and to stimulate the nervous system. Two to ten ounces of a 10:1000 sodium chloride solution at 100.-5° F. may be injected. If collapse occur injections of caffeine and ether should be given. The patient must be kept warm with hot water bottles and be stimulated by friction with turpentine liniment. The chief thing is to act promptly.

Paubotano.

Pouchet has found in paubotano, a Mexican drug belonging to the botanical genus of cassandra, which has been used as a substitute for quinine in malaria, an appreciable quantity of saponine, a small amount of an undetermined alkaloid, and two resinous substances, one of which was colorless and physiologically inert. The resinate alkali (the active rein combined with an alkali) was found to possess sufficiently irritant properties to cause a local abscess when a solution of twenty centigrammes in one cubic centimetre of water was injected subcutaneously into a guinea pig. Fifty centigrammes dissolved in five cubic centimetres of water and injected into the peritoneal cavity of a guinea pig proved fatal in four hours. The symptoms preceding death were a fall of temperature amounting to 7.6° C., abolition of the reflexes, and slowing of the heart and respiration after the animal

had passed through a stage of dyspnea. At the autopsy were found a general congestion, but particularly marked in the intestines, and an extravasation of blood into the peritoneum, the heart and lungs being asphyxiated. In the frog the toxic dose was seven to ten centigrammes. With doses of twenty-five milligrammes the rate of the heart-beats was somewhat lowered, and a tendency to irregularity was manifested. With five centigrammes the pulse immediately became full and slow; later a period of transitory arhythmia occurred, the heart acting more and more slowly, to be arrested, in fatal cases, in systole. In dogs the arterial pressure was slightly increased by small doses, but considerable amounts (five centigrammes per kilogramme of body weight) caused a progressive diminution of blood-pressure, death occurring in the midst of intense paroxysms of dyspnea of the Cheyne-Stokes type. The post-mortem changes were the same as those described above. The alkaloid was found to possess very similar physiological properties as the resin.

Treatment of Eclampsia.

It is impossible says Veit to recommend a uniform plan of treatment; there is, however, no doubt in the author's mind but that a large number of cases would and do recover without any and with every treatment. The claim that the prognosis is bettered through rapid delivery by accouchement forcè or Cesarean section is as yet not substantiated, as are also the reported favorable results from venesection. The best method so far seems to be the adminisrration of large doses of morphine. A rational therapy of eclampsia is not possible until the pathology of the disease is absolutely clear; it is not improbable but that different cases have a different etiological basis. The hastening of labor by harmless means, rupture of the membranes, delivery after full dilatation, large doses of morphine for the suppression of the attacks, the non-administration of food, per os, to unconscious patients, and the induction of diaphoresis by external means, seem to offer the best chances to the patients. There is practically no reason why an attack of eclampsia in itself should be considered so grave as to justify radical operations, which may be safe in the hands of single operators, but which subject the patient to great risks if performed by the profession at large. In exceptional cases, however, exceptional operations are justifiable.

Exophthalmic Goitre Treated by Electricity.

Dr. I. R. Page (Gynecological and Obstetrical Society of Baltimore), in the latter part of 1893 there came under my observation three cases of exophthalmic goitre in females. Two of the cases occurred in young white women, aged respectively 19 and 20, unmarried, and hard students. In both cases there was a history of the existence of the disease in other and older members of the family, and I learned upon inquiry that the disease was rather common in the section of country in which they lived. Both lobes of the thyroid gland were invaded; marked tachycardia existed; pulse 100 to 130; both were leukemic and had some edema of ankles and of the superior eyelids. There was no albuminuria; there was no heart-valve disturbance. Inquiry into catamenial functions elicited nothing markedly abnormal. They complained of headache and great restlessness; fearful about their hearts; given at times to sudden seizures of palpitation—a perfect delirium cardis. It was more for this condition than for treatment of goitre that I was called in. Wishing to ascertain what, if any, effect might be produced by thyroid extract, I ordered this in five-grain doses twice a day; but after a month's trial, as there was no amelioration of the symptoms complained of, I resorted to galvanism, applying the positive electrode to the gland, wetting the electrode with a saturated solution of potassic iodide, and the negative pole to nape of neck. I kept up this treatment for six weeks, applied five to ten minutes every other day. The result was reduction of gland to normal, a gradual slowing of pulse to 78 to 80, return to restful sleep, abolishment of headaches, and increase of body weight, in one six pounds, in the other ten. There has been so far no return of the disease.

The idea that the element iodine might stand in some very definite relation to the

metabolism of the thyroid gland, as held by Chatin in 1850, was in mind when it was administered in these two cases by cataphoresis. It seems to me more probable now, since it has been demonstrated by the distinguished Freiburg chemist, Baumann, that there exists an organic iodine compound in the normal thyroid gland. Kocher, the noted surgeon at Zurich, only a short time ago, relying upon the fact that the efficacy of iodine in the treatment of diseases of the thyroid gland compared favorably with that of the thyroid extract, suggested that the normal thyroid gland be examined to see if iodine be found in it. Baumann has since detected it in the ash from one gramme of the dried gland.

The third case was that of a white married woman, aged about 40, mother of six children who were born one at a time at intervals of from twelve to eighteen months. Health kept pretty good until the latter part of 1892. She then had a severe attack of the grippe, and, following this, loss of flesh (eighteen pounds), sleeplessness, sense of fear, sudden attacks of palpitation of the heart, dyspnea and sweating, and a rapid enlargement of thyroid gland (right and left lobes). Pulse was irregular, always rapid: s. t. 130×. Added to all this poor health she became pregnant. During this pregnancy there was severe swelling of ankles and edema of the right upper eyelid; mental condition melancholic, with constant apprehension of sudden death. Examination of urine, negative results. During pregnancy I did not feel justified in doing anything for the exophthalmic goitre, but at the termination of that state (she could not nurse her child) I used tentatively once a day five grain tablets of thyroid extract; kept this up for several months; gave strychnine and cod liver oil. As she appeared no better, in fact got weaker and thinner, I then used general faradization, rest and forced feeding, and massage. On this improvement set in slowly After six weeks I began treatment by galvanism—potassium iodide solution on positive pole on the thyroid, negative pole on nape of neck; every other day about eight minutes' current, strength about four milamperes. There was subinvolution of uterus, and twice a week I applied iodine tincture to cervix and passed a current of ten milamperes through uterus, positive pole in cervix, negative pole over pubis. The melancholia, tachycardia, enlargement of thyroid gradually left. She regained all her normal weight and is now one of the female cyclists who adorn our highways.

The Treatment of Tuberculous Glands of the Neck.

Dr. Stiles in the British Medical Journal says that tuberculous disease of the cervical lymphatics gives rise to such very different morbid conditions, and presents itself clinically in such diverse forms, that no one line of treatment can be expected to suffice. Each case must be considered and treated on its own merits. Although in tuberculous adenitis it is the particular morbid condition which exists which mainly determines the treatment, there are, nevertheless, a number of secondary factors to be taken into account, and the value of each correctly estimated, before judgment be pronounced as to the particular line of treatment or operation to be adopted. For instance, the extent of the disease, its duration and progress, the previous treatment and its results, have all to be taken into account. Another important point is whether the glandular affection is a part of a general tuberculosis or purely a local condition. If the latter, the primary source of the infection must be sought for, and removed whenever possible.

That the disease should be so often localized to the glands of the neck is not surprising, when we remember the frequency with which the surface lesions exist in children in connection with the mouth, naso-pharynx, tympanum, conjunctivæ, and the skin of the head generally.

It is more than probable that the prevalence of tuberculous glands in the neck is intimately associated with the special development of adenoid tissue at this period of life, and with the frequency with which inflammatory processes are met in connection with the faucial and pharyngeal tonsils, and with the decay of the milk teeth.

Formerly the teeth were regarded as the most frequent and important source of infection. Within the last few years the tonsils, which Virchow taught were peculiarly exempt from tubercle, have

been shown to be a frequent seat of it, and along with the naso-pharyngeal and lingual adenoid tissue, they are now regarded as a more important source of infection even than the teeth.

While admitting the primary importance of the naso-pharynx as a source from which the deep cervical glands become infected, the author is inclined to attribute considerable blame to the teeth as a source of infection of the submaxillary glands. Starck examined 113 children (aged from 3 to 12 years) with tuberculous cervical adenitis, and came to the conclusion that in 41 per cent. no source of infection could be discovered other than carious teeth, which were present in 80 per cent. of the cases.

As to treatment he adopts the following plan when the glands have broken down:

1. Incision.
2. Curetting.
3. Application of pure carbolic acid.
4. Packing with iodoformized wool.

The author claims for the wool that it is soft, elastic, acts as a good drain, and can be easily made to fill the entire cavity.

If the glands have not broken down and are very extensive he does not recommend excision, but opens and treats each abscess as the glands break down.

Early Diagnosis of Gastric Carcinoma.

It is still far from practicable to recognise the early stages of gastric carcinoma, says Dr. Schule. Transillumination of the stomach has given no satisfactory results. There is no symptom other than the presence of a tumour pathognomonic of gastric carcinoma, and in the earlier stages often nothing can be felt. Other symptoms of unequal value have to be depended upon. The author bases his remarks on 40 undoubted cases of gastric carcinoma. In 80 per cent. there was an entire absence of free hydrochloric acid, and in another 10 per cent. the result of the examination was variable. It is certain that in the great majority of cases free hydrochloric acid disappears, no matter where the disease is situated. Unfortunately anachlorhydria exists in other gastric and general diseases. The absence of the acid is due to changes in the secreting epithelium. Even great deficiency in the hydrochloric acid is uncommon except in gastric carcinoma. The author would attach considerable importance to the presence of lactic acid, and he discusses its relation to motor insufficiency of the stomach. Any considerable motor insufficiency is not common in carcinoma of the body of the stomach. Thus, none of these symptoms are pathognomonic. Carcinoma of the pylorus is most easily recognised because motor insufficiency occurs early. The diagnosis is confirmed by the absence of free hydrochloric acid and also by the appearance of lactic acid. These facts may be noted before a tumor can be recognised. If there is a history of previous ulcer the diagnosis is more difficult, but in stenosis as a result of ulcer anachlorhodria is rare. If free hydrochloric acid is present, a carcinoma supervening upou an ulcer or a non malignant stenosis exists. The diagnosis is still more difficult when, without motor insufficiency gastric symptoms are present and yet no tumor or enlargement of glands. If lactic acid appears, it is in favor of carcinoma. Chronic catarrh of the stomach and enteroptosis are the two diseases likely to give rise to mistakes.

Neurosine vs. Morphine. Positively no Morphine in Neurosine.

Neurosine is the most powerful Neurotic attainable, quieting the nerves and producing natural sleep. Physicians should never prescribe or recommend any product which the laity could obtain from the druggists to produce sleep that contains morphine. There is hardly a day but what fatal results occurs (to those using stimulants to excess and other causes) who resort to neurotics to steady their nerves and produce sleep. It is hard for one to believe that manufacturing chemists would be so unprincipled as to compound morphine without indicating same in formula. The Dios Chemical Co., of St. Louis, manufacturers of Neurosine, publishes the formula complete, which is composed of the following well known and tried drugs; Chemically pure Bromides of Potassium, Sodium, Ammonium, Zinc, Extracts of Henbane, Belladonna, Lupuli and Cascara Sagrada with Aromatic Elixirs.

The Relation of the Specific Gravity and the Amount of Albumin in Pathologic Fluids.

Ott has estimated the amount of albumin in pathologic fluids (by means of Kjeldahl's method, and multiplying the per cent. of N by the factor 6.25) for the purpose of determining (1) the amount of albumin in the various diseases; (2) the relation of these amounts to the specific gravity.

In the first table, containing twenty-five examinations, eleven appertain to the fluid in cancer of the peritoneum,—the albumin was about 4 per cent. on an average. The amounts differed in the same case at different punctures. In peritoneal tuberculosis it was 6 558 per cent.; in hepatic cirrhosis from 2.006 to 6.887 per cent.; in echinococcus cyst of the liver 0.360 per cent.; in ovarian cysts from 1.818 to 5.435 per cent.; in pyopneumothorax from 8.281 to 8.928 per cent.; in hydrocele the amount was usually high, but varied greatly, from 0.737 to 7.851. The general conclusion from these figures is that there is no definite amount of albumin for any one disease.

A study of the specific gravity in the light of the albumin-content of the fluids shows further that the former—*i. e.*, the speeific gravity—does not permit any conclusion as to the quantity of albumin in pathologic fluids, and that it is of no diagnostic value. For example, the fluid from a case of cancer of the peritoneum and that from an echincoccus cyst had the same specific gravity, 1009, yet the former contained 2.6 per cent. albumin and the latter only 0.360 per cent.

Alcoholism of Nursing Infants.

E. Valin states that in rich families in Paris it is a very common thing to give the wet-nurse a litre or a bottle of good wine, to which one or two bottles of good, strong beer are frequently added. As a result the child often becomes nervous and irritable, and is not improved in condition by nursing; its sleep is troubled, or it may have insomnia followed by a heavy, almost comatose sleep, during which the face is distorted and the limbs subject to brusque movements. Convulsions may occur. These symptoms may disappear, only to recur; the parents attribute them to dentition; the physician suspects meningitis, or, taking the nurse aside, questions her and finds that she has been adding a few glasses of brandy to her daily diet, or has taken wine and beer or a few bottles of "half-and-half." Upon the nurse's leaving off these stimulants the infant usually becomes cured. The author thinks that half a litre of wine a day can do no harm, but deprecates the idea that beer and wine are necessary to the formation of milk. A mixture of milk and sweetened water he considers more to purpose, but seems to think his suggestion a trifle radical for France.

Early and Intensive Method of Curing Syphilis.

Manino reports (Bulletin Med.) the highly successful results of eight years' experience of this treatment. Instead of waiting for the usual symptoms to appear the initial chancre is excised or thermo-cauterized and calomel injected every fortnight for ten to twelve months (10 centigrams calomel to 1 gram glycerine and one drop water). After this the injections are made every twenty days for three or four months; then one in sixty days for two months more, when potassium iodide is administered for 2 months; then two months more of mercury injections, this time the sublimate. The patient then rests for a couple of months, when the iodide is recommenced for a while, followed by a proto-iodide, which is kept up till the end of the second year. The initial chancre soon subsides, and no secondary or tertiary phenomena have appeared in any of the cases treated during eight years. The inconveniences of this treatment, the painful injections, the temporary loss of appetite and weight, are far more than compensated by the victory over the disease, which is arrested before it becomes constitutional.

Messrs. Armour & Co. announce in their medical journal advertisements that they have reduced the price of their Glycerine Extract of Red Bone Marrow from $18.00 to $12.00 per dozen. This is the most reliable Bone Marrow preparation on the market, and any physicians who have not seen samples of it can obtain them by addressing Messrs. Armour & Co., Chicago.

Notes on the Treatment of Fæcal Fistulæ.*

At the thirteenth annual meeting of the New York State Medical Association, which was recently held in New York City, Dr. Frederick Holme Wiggin, of New York county, presented a paper with the above title. The chief cause of the occurrence of fæcal fistula was stated to be the delay in resorting to operative measures to which patients suffering from typhlœnteritis, or strangulated hernia were frequently subjected while their ailment was carefully diagnosticated. The view recently advanced by a writer on the subject under consideration, that the best treatment for this condition consisted in its prevention, was concurred in. But in the case in which this mishap had occurred, it was pointed out that if the opening was of small size, was located near or below the ileo-cæcal valve and no obstruction to the fæcal current existed, operative measures might be deferred, as in most instances the opening would close in a short time spontaneously. On the other hand, if the bowel opening was of large size, was situated laterally, or some distance above the ileo-cæcal valve, and was accompanied by the escape of a large proportion of the contents of the bowel, operative procedure for the closure of the opening should be speedily undertaken.

The histories of three cases, successfully treated by surgical measures were cited. In two instances, the patients were inmates of the Hartford (Connecticut) Hospital, and were operated upon by Dr. Wiggins, by reason of an invitation which was extended to him by the medical board of that institution, after several previous unsuccessful efforts to close the bowel openings had been made. The occurrence of the fistulous opening was due in the first case to failure, and in the second case, to delay in resorting to surgical treatment of typhlenteritis, from which disease both patients originally suffered. In the third case, the bowel opening was caused either by the pressure of the gauze used to drain the abscess cavity, or by an ulcerative process which originated from within the gut. In the first case, as the opening in the bowel was of large size, irregular in shape, and the gut was thickened and friable, the diseased portion of bowel containing the opening, about four inches in length, was excised, and the divided ends joined by the suture method of Maunsell. In the second and third cases, the bowel openings were situated in the head of the colon, and were in both instances closed by means of several rows of sutures, after which the omentum was drawn over the former site of the fistula, and retained in position by sutures.

In describing the technic employed, the writer laid much stress upon th following points, viz.: the thorough disinfection of the parts, including the interior of the bowel, with hydrozone the closing of the intestinal opening, when possible, before the breaking up of the peritoneal adhesions, and the opening of the general cavity, the removal of any existing obstruction to the fæcal current, the disinfection of the bowel surface with a solution of hydroxone, before and after the placing of the sutures, the control of oozing from the cicatricial tissue by the same means and the closure by a single row of silk-worm gut sutures without drainage of the abdominal wound after the washing of the peritoneal cavity with saline solution, some of which is allowed to remain.

In concluding, the writer stated that ever since September. 1893, when he had proved the value of hydrogen dioxide as an effective antiseptic, which in proper solution did not unduly irritate the peritoneum, when followed by a six-tenths per cent. saline solution, he had had little reason to fear the danger of causing septic peritonitis from the accidental escape of pus or fæcal matter while operating; and that when this complication had occurred, it had been invariably successfully met by the use of hydrogen dioxide in the manner described in the paper. He advised the excision of the diseased portion of the gut in those instances where it had become much thickened and friable, and expressed the belief that with a clearer understanding of the objects to be attained by operation—i. e. the restoration of the integrity of the intestinal canal, as well as the closure of the opening in the

*Abstracted from the Medical Record of October 24th, 1896.

bowel—future operations for the cure of fæcal fistula would more frequently result successfully than they had in the past.

The paper was discussed at some length by Dr. H. O. Marcy, of Boston, and Dr. Joseph D. Bryant, of New York county, who commended it, and in the main, they endorsed the writer's views.

Etiology of Follicular Enteritis in Children

Finkelstein is credited by the British Medical Journal as saying that it is universally admitted that the majority of cases of gastro-intestinal enteritis are due to an infection. The source of the contagion lies in the stools. Two groups of the disease are to be distinguished—the dysenteric and the toxic. The actual cause of the disease must therefore be able to give rise to irritation of the mucous membrane, and to produce toxic products. The bacteriological examination of the purulent masses in my cases showed the presence of abundant rod-like micro-organisms contained in the pus cells, and varying much in appearance. Often they were arranged in twos. All the different forms were shown to belong to a single microrganism. By cultivation, a microbe possessing extraordinary resemblances to the B. coli communis in almost pure culture was obtained. In mice it produced, when introduced with the food, a disease very like Loeffler's mouse typhoid. The morbid appearances corresponded exactly to those described by Heubner as taking place in the epithelium in cholera infantum, but ulcerative processes were absent. The micro-organism is only present in the glands, and hence the death of the epithelium must be due to a toxic action. The bacillus is also able to produce remote toxic effects. Growth on potato showed difference from that of the B. coli, otherwise the differences were rather one of degree than of kind. Experiments on animals yielded more important results. Virulent cultures of the B coli communis were shown not to be able to act pathologically on healthy mucous membrane. A close relationship existed between the bacillus in question with the bacteria known to produce the manifestations in meat poisoning. Thus it does not appear correct to class this micro-organism as the B. coli communis. The virulence of the micro-organiam varies greatly and can be diminished by culture. As regards its pathogenic properties, it was found constantly present in over 50 cases of typical enteritis and colitis dysenterica. All cholera-like forms must not be grouped as follicular enteritis. If the microbe has lived and flourished in the milk consumed, the symptoms of intoxication may begin forthwith. It may be said that follicular enteritis passes through the stages of dyspepsia, intestinal catarrh, up to a cholera-like disease. When the intestinal epithelium is destroyed, the bacillus may get into the blood streams and produce a septicæmia as well as hæmorrhagic purulent metastases. Mixed infections are common. There are two forms of the general infection: one resembling typhoid, and the other giving rise to high fever, collapse, and rapid death. Adults rarely suffer, although the bacillus has been found present in the intestine.

Resection of the Vasa Deferentia for Prostatic Hypertrophy.

Novè-Toperand reports in the British Medical Journal three cases in which resection of the vasa deferentia evidently resulted in a beneficial influence on many of the troubles caused by enlarged prostate. These, together with cases recorded by other surgeons, prove that this operation relieves the pain and reduces the increasee frequency of micturition, and, in some patients, results in a complete cessation of pyuria. Such treatment, however, is rarely folowed by appreciable atroyhy of the enlarged prostrate. Although in some recorded cases no relapse occurred after intervals of several months, it remains to be proved whether this amelioration can, as a rule, be regarded as permanent. Resection of the vasa deferentia acts, the author holds, by causing modifications in the glandular tissue, and by relieving or altogether abolishing the vesico-prostatic congestion which plays so prominent a part in the production of the symptoms of advanced prostatism. It is very probable that division of the vas deferens by suppres-

sing the testicular function removes the stimulus of prostatic congestion, and so induces a state of repose in the whole urinary apparatus. The operation is particularly indicated in the middle period of prostatism when the patient's troubles—cystitis, hæmaturia, and complete or incomplete retention—are usually the result of congestion. In a later stage, in which the enlargement and deformity of the prostate are due to well-developed structural changes, resection of the vasa deferentia, though it may render service by relieving pain, will necessarily fail to do much good.

Hysterical Aphonia and Deafness.

Trifiletti in the Dublin Medical Journal gives an account of a case in a female servant, 18 years old, of good constitution, who had always been in good health and has never had any nervous troubles, the same being the case with the other members of her family. Since some time her menstruation had been irregular, scanty, and accompanied by pain in the left ovarian region and the back, as well as by frontal cephalalgia. The aphonia dated back fifteen days, and began at the period of menstruation, following an emotional shock. The patient presented herself at the dispensary, where a laryngoscopical examination was made; this disclosed bilateral symmetrical paralysis of the adductors of the vocal cords, which in no way corresponded with the degree of aphonia, and was probably referable to hysteria. Chronic rhinitis with secondary pharyngitis and hypertrophy of the tonsils were noted. After some agreeable surprise the voice returned, but at the same time the hearing was abolished. The patient also complained of buzzing in the left ear, and of a sense of weight at the top of the head, the back, and the left ovarian region. Deafness was not complete and presented the clinical characteristics of hysterical deafness. Otoscopy showed nothing abnormal with the exception of a slight opacity and retraction of the two membranes of the tympanum. Afterward the aphonia appeared, subject to variations, disappearing spontaneously and reappearing upon compression exerted upon the ovarian region. The hearing became spontaneously and permanently normal.

The author concludes that the symptons in this case were due rather to an impressionable sensorial hemianæsthesia than to peripheral hysteria, since the manifestations were diffuse and mainly located on the left side.

The Pulse in the Smallest Vessel.

Herz, according to the London Lancet has investigated this subject by a new method which he terms "onychography." It consists of a delicately-poised sphygmograph, preferably of Jaquet's pattern, the button of which is placed upon the finger-nail and kept there under regulated pressure. The limb being kept steady a curve is traced, which, according to the author, is liable to fewer sources of error than the ordinary sphygmogram. Like the sphymogram the onychographic curve shows three principal sets of waves, the largest corresponding to the respirations, the intermediate to the heart beats, and the smallest to the secondary waves; but it has also two special varieties of large undulations, due respectively to changes in the width of the arterioles and in the rapidity of the blood flow. Differences in the condition of the pressure within the arteries and capillaries are expressed by a want of correspondence between the sphygmograms and the onychograms. The onychogram rises during inspiration and falls in expiration, these variations being accentuated by dyspnœa and diminished by valvular disease of the heart, with the exception of tricuspid regurgitation. When the cardiac rhythm is irregular in force the rapidity of the blood flow is affected, and large undulations appear upon the onychogram, though the sphygmogram may appear to be normal. The onychographic waves are diminished in size and rounded off under conditions of psychical strain, such as the performance of elaborate calculations. Heat increases and cold dimishes their volume, but the latter, if prolonged, eventually leads to dilatation. In jaundice the waves are very marked, confirming Drasche's view that the capillary walls are paralysed in cholœmia; the onychogram in this case resembles that in arotic regurgitation. In fever there is a sharp decent from the

summit of the curve, which is followed by a plateau; the character of the rise varies, and often tends towards reduplication. The bifid apex is especially marked in inflammatory affections of the respiratory organs, and Herz considers the second peak to be transmitted through the veins from the right heart, Affections of the mitral valve tend to abolish the onychogram, while aortic disease increases the excursions, except when associated with rigidity of the small vessels. In sclerosis of the aorta and larger vessels although the pulse is much smaller than normal, the cardiac and respiratory waves of the onychogram are much increased in size, so that it must be concluded that the smallest vessels, whose walls are not muscular, pulsate more vigorously the greater the rigidity of the tubes connecting them with the heart. The author hence deduces that the endarteritic process cannot commence in the smallest vessels, but must in them be secondary to similar changes in the aorta and larger arteries. Eventually this is associated with obliterative inflammation of the intima of the arterioles; hence these researches are strongly opposed to the Gull and Sutton theory of arterio-capillary fibrosis.

A New Method of Wound Treatment.

Some time ago we called attention to the fact that Dr. C. L. Schleich, of Berlin, to whom surgery is indebted for a number of ingenious discoveries—notably infiltration anæsthesia—had introduced a new antiseptic dressing for wounds which promised to be a valuable acquisition to the resources of the surgeon. Glutol, as the new compound has since been called, is a whitish, granular powder, odorless, non-irritating and non-toxic, which is found by dissolving gelatine in water and drying the solution in the vapors of formaline. The advantages claimed for it were that when applied to the surface of a wound the gelatine is slowly absorbed, with the continuous liberation of small amount of formaline—a powerful, yet innocuous antiseptic. Despite the short time that has elapsed since the introduction of glutol, it has been submitted to extensive experimentation, and the high claims of its value made by Schleich have been fully corroborated. From the numerous reports that have appeared on the new antiseptic we select that of Dr. H. F. Hoyt, Chief Surgeon, G. N. and C. B. and N. Railways, as well illustrating its utility in general surgical practice. It is his custom to employ it as follows: After sterilizing with either bichloride, boric acid, permanganate of potash, peroxide of hydrogen, as the contingency of the case may require, he irrigates the wound with sterilized water, drying the surface with sterilized gauze. He then applies glutol in the same manner that iodoform is used, covering the wound with sterile gauze, cotton and bandage: For the treatment of any variety of an uninfected wound, this method, in Dr. Hoyt's opinion comes nearer being an ideal than any other he has employed. Under its influence septic wounds rapidly become uninfected. The author has been particularly pleased with glutol in cases of extensive laceration of the tissues of the fingers sustained by brake or switchmen, and often complicated by fracture of the phalanges. After cleansing the wound, reducing the fracture, and inserting a stitch if necessary, he applies glutol, gauze, cotton and bandage, and extends the hand on a splint. In a week or ten days, if the wound is uninfected, on removal of the dressing there will be no pain or inflammation. The scab that has formed is so firm that no splint is further required, and after the second dressing of a non-infected wound nothing need be done than to protect the injured member with a clean roller bandage until recovery is complete. In conclusion Dr. Hoyt states that glutol is inexpensive in view of the small quantity, and that its application is entirely painless.

Announcement.

E. B. Treat, Publisher, New York, has in press for issuance early in 1897, the International Medical Annual; being the fifteenth yearly issue of that well-known one volume reference work. The prospectus shows that the volume will be the result of the labors of upwards of forty physicians and surgeons, of international reputation, and will present the world's progress in medical science.

The publisher states that the kind reception accorded to the "Medical Annual" has rendered it impossible for him to

spare no expense in its production; while the editorial staff have devoted a large amount of time and labor in so condensing the literary matter, as to confine the volume within a reasonable size, without omitting facts of practical importance.

The value of the work will be greatly enhanced by the thoroughness of illustration, both colored plates and photographic reproductions in black and white will be used wherever helpful in elucidating the text.

"To those who need the condensed and well-arranged presentation of the medical advances of the past year—and this class must necessarily include all physicians—we heartily commend the 'International Medical Annual.'"

The volume will contain about 700 pages. The price will be the same as heretofore, $2.75. Full descriptive circular will be sent upon application to the publisher.

The Ice-bag in Pneumonia.

Dr. Lees gives the following directions for the use of the ice–bag in pneumonia:

1. Apply the ice bag over the dull area, and especially over the advancing edge of the consolidation.

2. If the area is large, use two bags at least, or three. Even young children may require two.

3. Expect to find a distant local effect (improvement of percussion-note, less bronchial breathing, looser rāles) on careful physical examination, after the ice has been applied for twenty–four hours.

4. If fresh areas of consolidation develop, use additional bags. Four or even more may be needed in a bad case. The amount of the dose is as important as it is with drugs.

5. Take the temperature every half-hour for the first three hours, afterward every two hours.

6. Apply hot water bottles to the feet and legs. For children supply these before the ice is applied.

7. Examine the physical signs carefully twice daily and shift the bags accordingly.

8. If pericarditis is present, place one ice-bag over the heart.

9. If temperature below 99° F. (37.2° C.), or hands cold, or lips bluish, remove the bags for an hour; then replace them, and use them for two or three hour periods, with one or two hour intervals.

10. If in a severe case there is distinct cyanosis and a rapid feeble pulse, consider whether leeches (in urgent cases venesection) would not relieve the right heart.

11. In all cases see that sleep is secured during the first three or four nights. If the relief afforded by the ice-bag does not suffice for this, give chloralamid or morphine.

Pneumonia treated vigorously with ice within twenty-four hours after the rigor may sometimes be aborted.

The Diagnosis of Cancer of the Tongue.

In the "Hospital" Dr. Spencer says: The success of the treatment of cancer of the tongue hangs entirely upon an early diagnosis. The only real difficulty is in distinguishing syphilitic ulceration from cancer. Tubercular ulceration may be dismissed by saying that it is either secondary to pulmonary diseases or occasionally is seen as lupus in young people before or about puberty. A simple ulcer, due to a sharp tooth, salivary calculus.or ill-fitting toothplate, should show signs of healing within a week of the removal of the cause. A primary syphilitic sore on the tongue is often spoken of, but is really a rare phenomenon,and the absence of the characteristic signs, viz., the rapid development of the swelling and of the glands, together with the rash on the trunk, should prevent the question from being raised. It was, nevertheless, held in the case of a man of twenty-eight that his condition was due to primary syphilis on account of his age, although no rash nor rapid enlargement of glands had occurred. I prepared a microscopic specimen from the surface of the growth, which clearly showed epitheliomatous nest cells, yet, unfortunately, my diagnosis was not agreed to untll the disease had got beyond the range of an operation. Both chronic superficial glossitis and an ulcer on the side of the tongue, syphilitic in origin, may pass over into cancer; hence uncured cases require the closest attention. If mercury, given internally, does no good in a week it shoule be rubbed in until the gums become sore, and

so the full effect of the drug quickly reached, and an improvement, if the disease is syphitilitic,will be noticeable within a fortnight. At the same time curious and sharp teeth may be removed,smoking stopped, and chromic acid, 10 per cent., may be applied by the patient, or bicyanide of mercury, 1 in 1,000, by the practitioner himself. The most difficult condition to distinguish from cancer is a tertiary syphilitic ulceration, around which there may be extensive induration and some tenderness. or even enlargement of the glands, especially when the mouth is foul. Full doses of iodide of potassium should be given in addition to the mercury, and the dose be quickly raised to thirty grains,or even one drachm, three times a day,whilst the patient meanwhile is kept quiet and is well fed. Ten days of such active treatment will certainly suffice to produce an improvement in a gummatous ulcer, but this improvement must be manifest to the practitioner and not depend upon the patient's symptoms. Treatment beyond a fortnight in the absence of improvement only wastes precious time and weakens the patient. In any case of doubt a piece is snipped off for microscopic examination after painting 20 per cent. cocaine upon the spot.

Death in Hysteria.

Fournier and Sollier draw attention in the Dublin Med. Journal to the fact that a fatal termination may sometimes result from the different effects of hysteria, and that it is quite a mistake to look upon the disease as always having a favourable prognosis so far as life is concerned. One of the authors on a previous occasion pointed out that death may be due to spasm of the glottis so severe as to require tracheotomy. Sollier records an instance of very severe asphyxia in a child aged 6, which rapidly gave way to faradism, and Fournier records a case of a girl aged 20 showing a similar condition, being saved from death on one occasion by faradism, but who afterwards died from a similar attack. The authors therefore point out that expectant treatment in hysteria, more particularly when there are laryngeal manifestations, is anything but safe. They also refer to hysterical angina pectoris, and although they admit that in this affection the prognosis is extremely favorable, they quote a case under Potain's care in which death took place, and in which on *post mortem* examination absolutely nothing was found. They then refer to hysterical anorexia in which there is sometimes a fatal termination, and even should recourse be had to artificial feeding there seems to be no power of absorption. The wasting continues and the patient dies. They also refer to the danger of forcible feeding in such cases,and one of their patients who presented a marked degree of anorexia expressed a wish for some cheese, and died the same evening that she ate it. The authors point out that sudden death may occur after hysterical vomiting, and they give the notes of one such case, no lesion of any kind being found on *post-mortem* examination. Vaginal hysterectomy is, according to one of the authors, practically fatal in hysterical cases.

Surgical Treatment of Renal Calculus.

Nash, in the British Medical Journal reports four interesting instances of renal surgery. The first was a case of hydronephosis, depending upon the presence of a calculus which, when aggregated in the renal pelvis, had failed to pass along the ureter, and, by occasionally blocking the waterway, led to serious distension of the inclosing structure and the formation of a fluid tumor, which occupied at one time the lumbar region and at others passed up under the liver and ribs, to be hidden both from sight and touch. Through a vertical incision two and one-half inches from the centre of the lumbar spines the kidney was speedily reached, the pelvis defined and incised, and the calculus removed. The patient, a woman aged 38 years, made a good recovery. In the second case there was a persistent tumor in the loin, which did not appear to vary much in size. This was found to be due to closure of one of the papillæ by flakes of phosphate of lime, and consequent distention of the corresponding calyx. Incision of the kidney, followed by dilatation, resulted in the discharge of several ounces of white, flaky material. Careful examination of the cavity failed to reveal any solid, calculous mass. This operation was completely successful, and on the

fourth day the urine ceased to flow by the lumbar wound. The third patient, a woman aged 54 years had a suppurative pyelitis and a perinephritic abscess of large extent, the communication between the former and the latter being a small opening in the renal pelvis, or, more correctly, one of the calyces of this cavity. Under this lay a small, phosphatic calculus imbedded in a mass of soft granulation tissue. The large purulent cavity was opened by an oblique incision parallel to the last rib and the calculus removed. The patient, who at the time of the operation was in a very critical condition, was well and able to leave the hospital at the end of the sixth week. In the fourth case, which was one of severe lumbar pain on the right side and hæmaturia, a brown, almost circular stone was found lying in one of the posterior calyces. The renal structure and both the fibrous and fatty capsules of the organ were in a normal condition.

Intestinal Perforations in Typhoid Fever.

Monod, at a recent meeting of the Société Francaise de Dermatologie, gave an account of a case,which he had been called upon to treat three weeks previously. in which there was intestinal perforation. He performed a medical laparotomy,which gave issue to a quantity of purulent serum and to a loop of thin intestine which was perforated. The latter was sutured, and after lavage and drainage of the stomach it was closed. Improvement seemed ap parent during thirty-six hours, but the patient died. The autopsy revealed the fact that the suture had remained intact. In 1884 Leyden conceived the idea of surgical intervention during typhoid fever, and in 1890 Lovis reported 11 cases with 11 deaths. Monod stated that his researches had attained a total of 35 cases, among which were 5 recoveries, but that if carefully examined it would be found that these 5 cases are far from being perfectly authentic, particularly those of Drs. Murphy,Hill and Wagner. Only 2 appear to be undoubted—1 in 1891 and 1 in 1895.

It may be stated that the intestinal suture remains intact, even in these fatal cases, but the patient is already in a state of semicollapse, and should be very carefully examined before it is decided to have him run the risk of a laparotomy. The perforation occurs in the centre of the peritoneum, and generally infects the latter. The perforations are often multiple, and even upon intervention it is not possible to find them all. A patient presenting intestinal perforation during typhoid fever dies, or is likely to die. If there were only a single chance of recovery (and there are two) it is impossible to give the patient the benefit of this chance, particularly if the conditions are at all favorable.

A Useful Publication.

Victor Koechl & Co., importers of some of our most ualuable modern medicinal preparations, such as Antipyrine, Diphtheria Antitoxine—"Behring," Lanoline, Dermatol, Tuberculin, etc., are publishing a little monthly entitled "Therapeutic Progress," devoted to brief reports and condensed abstracts pertaining to new remedies. Each issue contains something of practical interest to the physician. We have during the past year numbered this little paper among our exchanges, and can vouch for its practical helpfulness, and also for the ethical and scientific manner in which it is edited.

Any physician who desires to keep informed in regard to the newer remedies, can receive "Therapeutic Progress" free of charge during 1897, by addressing a request to Victor Koechl & Co., 79 Murray Street, New York.

Adhesions of Placenta, with Hemorrhage

I had a bad case of adhesion of placenta with dangerous hemorrhage. With ergot and Sanmetto the danger was at once removed, and by continued use of Sanmetto patient, although very weak from loss of blood, improved rapidly, and is now up and about the house, helping about her work. In sixty years practice, with an attendance upon more than three thousand child births, I have used no medicine that seemed to hit the case better than Sanmetto in this instance. I am now in my eighty-seventh year and have practiced since 1832.

Viola, Iowa. S. G. Matson, M. D.

Life of Sir Astley Cooper.

We have received from the Norwich Pharmacal Co., Norwich, N. Y., a very entertaining and interesting brochure with the above title, written by the editor of the "Medical Muse." It is replete with anecdotes, more especially of his boyhood days, and will well repay a perusal, not only for the vivid descriptions of the manners and dress of a surgeon ninety years ago, but incidentally to the discovery by Cooper of the virtues of the healing properties of Alum, in which Unguentine made by the Norwich Co., is a modification of his celebrated formula. It contains a portrait of Cooper painted by Sir Thomas Lawrence, president of the Royal Academy, the original of which hangs in Guy's Hospital, London, also the rare picture of Cooper's Debut in Surgery, and is intended as a New Year's present by the firm, who will send it to any physician on receipt of a postal card.

Chemical Treatment of Morphinism.

The British Medical Journal says that Erlenmeyer has for three years abandoned the method of rapidly cutting off morphine which is associated with his name in favor of one which he finds superior in respect of results. He noticed that the sudden deprivation of a morphinomaniac's drug was associated with the symptoms, both direct and remote, of hyperacid dyspepsia; actual investigation showed that when the sufferings caused by its discontinuance were most severe the sound revealed the presence of excess of hydrochloric acid in the stomach. The reason of this can be deduced from Alt's researches, which show that morphine injected under the skin is largely excreted into the stomach, where it must exert a narcotic influence both upon the gastric glands, inhibiting their secretion, and upon the nerves, numbing their sensibility. When the source of these actions is removed exactly the reverse changes take place; an excess of acid is poured forth upon the hypersensitive nerve endings, producing the symptoms of gastric disorder and of reflex nervous disturbances. To counteract this effect Hitzig washed out the stomach and introduced an alkaline solution of Carlsbad salts in place of the strongly acid gastric juice, with marked relief. Erlenmeyer aims, on the other hand, at the neutralization of the hydrochloric acid *in situ* by means of Fachingen water, which contains 0.35 per cent. of bicarbonate of soda. He has treated over 30 cases in this manner, with an entire absence of either gastric or nervous symptoms. It is noteworthy that, although the patients are perfectly well and comfortable without it, the craving for morphine remains unappeased, and they still shriek like maniacs for the drug. To make his treatment absolutely systematic the author intends to administer hydrochloric acid during the morphine-taking period, so as to avoid the subacidity of the stomach, and to retain the natural relations of the nerves to the acid.

Eczema and Hyacinths.

At a recent meeting of the Linnean Society of London, Dr. Morris, C. M. G., of the Royal Gardens, Kew, showed some specimens and slides of raphides in the bulb of the common garden hyacinth (hyacinthus orientalis and its varieties), Gardeners, says the "British Medical Journal," are aware that persons handling and cleaning these bulbs are liable to eczema, and Dr. Morris's experiments and observations in the Jodwell Laboratory at Kew have shown that the scales from the bulbs, whether dry or moist, were capable of causing much irritation in some people when applied to the skin. The raphides, which, it seems clear, cause this irritation, are needle-shaped crystals of oxalate of lime, varying in length from one hundredth to two hundredth of an inch. They are arranged in close bundles, and when the scales are rubbed are easily detached. Dr. D. H. Scott, F. R. S., at the same meeting, mentioned some experiments which confirmed the conclusion that the irritation of the skin produced by handling hyacinth bulbs was due to puncture by the numerous raphides on the scales. It appears that Roman hyacinths (var. albulus) are particularly liable to produce the irritation. As to the use of the bulbs of this crystal armour, it is suggested that they are protective, and as a matter of fact, gardeners are aware that snails will avoid hyacinth bulbs, but attack others growing close by.

Eclampsia and the Milk Treatment.

Ferre insists that the milk treatment is most efficient from a prophylactic point of view, though it does not necessarily cause the other alarming symptoms, besides the fits to vanish. He has never seen fits in a patient subjected for over a week to milk diet, nor any other trouble of a toxic origin. The alleged disappearance of albuminuria, on the other hand, does not necessarily occur. He speaks with equal decision on this point, declaring that he has never seen so much as an appreciable diminution of albumen, even after prolonged treatment by milk diet. Ferre says the same of the œdema; this treatment seems to have no effect on it. He emphasises the above facts because he is aware how some obstetricians have very naturally given up milk diet on account of persistence of albuminuria and œdema. Such a step is a mistake, for if the treatment be continued labour will proceed without any fits coming on, though the legs remain swollen and the urine albuminous.

Excessive Intestinal Putrefaction.

Dr. Bartley in the Brooklyn Medical Journal, points out that there are two forms of intestinal fermentation produced by micro-organisms, the one of the carbohydrates, the other of the proteids present in the gut, and that they are mutually antagonistic to one another. The fermentation of carbohydrates leads to the evolution of gasses, and to the formation of organic acids. The gasses cause discomfort and the acids interfere with pancreatic digestion, but the products formed are not very poisonous nor irritating. On the other hand the fermentation of proteid bodies caused by bacteria results in the formation of gases of more varied character, though in some cases no gas may be evolved, and in the production of many derivatives of a poisonous and dangerous action. The fæces are most offensive. In acute cases there are febrile symptoms; in chronic, depression, and nervous affections. In practice the tests for the ethereal sulphates in the urine are too complicated, but the ordinary color tests for indoxyl and skatol often afford valuable information. As to treatment, that by antiseptics is often disappointing; of them calomel is the best; a milk diet, with cheese or without, is the surest method of diminishing the fermentation. Salol and sodium salicylate do not act very well. Resorcin, given along with castor oil or magnesia, is frequently very effective. Irrigation of the colon is often of benefit, especially in the case of children. Gilbert et Dominici by giving a healthy man 15 grammes of sodium and magnesium sulphates, found that they could reduce the number of bacteria in the fæces very markedly. The salts were given before breakfast, and the number of bacteria in the fæces rose from the 67,000 per milligramme of the day before to 272,000 per milligramme. The stool of the day after contained only 55,000, and of the second day following the dose 1350 bacteria in each milligramme. The purgative had, therefore, acted rapidly in bringing down the number of organisms in the fæces from 67,000 to 1350 per milligramme.

The Limits of Vaginal as Compared With Abdominal Exploratory Section.

Dr. Coe in a recent edition of the Polyclinic gives the conditions which lead him to select the abdominal method of explorations: "1. In the case of neoplasms or obscure enlargements which are situated in the abdominal cavity, or have risen above the pelvic brim, especially if they are more or less adherent. 2. In ascites of doubtful origin, more particularly when tuberculous or malignant disease is suspected. 3. In cases of disease of the adnexa in which the latter are situated near or above the pelvic brim, as established by bimanual palpation. 4. In cases in which the history and symptoms point to general intestinal adhesions, and, above all, when appendical complications are suspected. 5. In ectopic gestation before rupture, when the sac is high up, at the side or in front of the uterus, instead of in Douglas' pouch. 6. In cases of extractable pelvic and abdominal pain of obscure origin, including the neuroses. On the other hand explorative vaginal section should be preferred; 1 In all cases in which the presence of pus within the pelvis is suspected, as in pyosalpinx, pelvic abscess proper suppura-

ting dermoids and cysto-adenomata, and hematocele. 2. In the case of small intrapelvic tumors situated in the pouch of Douglas, or at least readily accessible from below. Impacted ovarian cyts, dermoids, and fibroids belong to this category. 3. Adherent adnexa situated in the true pelvis. 4. Unruptured ectopic sacs in the same locality. 5. Circumscribed exudates and indurations in the broad ligaments or behind the uterus, especially when associated with displacement and fixation of the latter organ."

Surgical Iodoformism.

Tussau in the Dublin Medical Journal describes a pathological state which he names "surgical iodoformism," as distinguished from iodism. It occurs in some patients who have had their wounds treated by iodoform, and usually runs the following course: After a longer or shorter pertod of complete toleration the wound, while secreting no pus, is surrounded by an inflammatory area with development at its circumference of inflammatory vesicles (iodoformic herpes). Petechiæ appear near the wound or at a distance in patches or groups. The wound stagnates and inflames, but does not heal. A generalized pruritus along the collateral nerves of the fingers follows (iodoformic zoster), later blebs and diffuse phlyctenulæ. Areolar or pseudoerysipelatous lymphangitis appears in the affected limb. If the use of iodoform is persisted in the lymphangitis progresses, the tongue becomes coated, and the patient is agitated and sleepless. A phlegmonous condition with general symptoms develops, and necrosis may threaten the patient with loss of limb or life. The symptoms in question seem to occur only in presence of a wound dressed with iodoform, and application of this substance to mucous membranes—for example, erosions of the cevix uteri or urethra—do not produce them. The surgical dressing of burns with iodoform is, however, very dangerous. The pathogeny of this group of symptoms is due to a localized or generalized reflex polyneuro-dermatitis dependent on localized or generalised reflex polyneuritis. Iodoformism is not simply iodoformic herpes; this is only a firsl stage of its manifestation. A rational assumption is that iodoform exerts an action *sui generis* on the terminations of the nerves or the sensory corpuscles. Like all analgesics capable of suppressing or allaying pain at a given spot, iodoform determines more or less marked changes in the sensory corpuscles. These are probably the results of a mixed impression due to the emanations of iodine and to the irritating action of the crystals on the cells attacked; possibly also to a septic combination of iodine with the organic matter in the wound. The action of this substance may be at first local, but when absorbed it gives rise to constitutional or reflex action. The dematitis that follows is easily understood.

Puerperal Mortality.

The London Lancet commenting editorially on a recent paper contributed to the Epidemiological Society of London by Dr. W. William, says the fact that 4,000 mothers in England and Wales die in childbed every year is one that more than justifies renewed efforts to elucidate the causation of such a lamentable mortality with a view to its prevention. Puerperal mortality may be divided into two classes —the mortality due to puerperal fever, and that due to what is called "the accidents" of childbed, such as placenta prævia and eclampsia. During a period of forty-eight years—from 1847 to 1894—the mean annual mortality rate for puerperal fever has been 2 per 1,000 registered births, and that for the "accidents" of childbed has been 2.9. If the period of forty-eight years in question be divided into four periods of ten years each and one period of eight years, and the mortality during each such period for puerperal fever and for the accidents of childbed be tabulated, it will be seen that while during the period 1847-1854 the puerperal mortality from "accidents" of childbed was 3.01 per 1,000, it subsequently declined till during the period 1885-1894, it stood at 2.41. On the other hand, as regards the mortality from puerperal fever, the rate which during the period 1847-1854 was 5.72 had increased till during the period 1885 1894 it had reached 2.53. There is no doubt that to some extent this apparent increase may be accounted for by the fact that since

1881 the Registrar-General caused letters of inquiry to be sent in cases where women of child bearing age were certified as dying from peritonitis, pyæmia, etc. Still, as Dr. Williams says, this improved certification has now been many years in operation, and we might have expected to see some decline in the rate; but on the contrary, the fact is that from 1881 to 1894 "there has been a higher sustained mortality (from puerperal fever) than in any other previous or corresponding period." That puerperal fever is both more liable to attack primiparæ, and is also more likely to prove fatal in them than in multiparæ, appears to be certain. No doubt the explanation of this as suggested is the right one—viz., that tears and lacerations are always present to a greater or less extent in primiparæ, while in multiparæ this is not so. Every laceration is a possible source of danger, since it may allow of the entrance of septic matter. As regards the greater mortality of puerperal fever in primiparæ, Dr. Williams is able to speak of an epidemic that came under his personal investigation. In twelve cases in which primiparæ were affected eight (or 67 per cent.) died, while in fourteen cases where multiparæ were affected four (or 26.6 per cent.) died. Full particulars of this epidemic are given and are well worth attention, though the main points are sufficiently familiar. Thus, for instance, nearly all the fatal cases in each locality were attended by the same mid-wife. An interesting point is that a number of cases attended by the infected mid wives escaped; but this may be easily accounted for by supposing that in such cases there were no lacerations suitable for the entrance of septic poison, or that, owing to the midwives' hands being accidentally cleaner than usual, the supply of septic matter was temporarily deficient. Dr. Williams in investigating this epidemic interviewed some of the midwives concerned, who were so ignorant that they admitted that they did not even know that they might have been the means of spreading the disease, and of course they knew nothing of the means of disinfecting themselves. Yet puerperal fever has been clearly shown to be a preventable disease. It has been practically banished from the best managed lying in hospitals, where, apart from the antiseptic system, the conditions are necessarily extremely favourable for its prevalence. The sustained mortality due to the prevalence of puerperal fever *outside* lying in hospitals shows that the conditions under which women are confined outside these hospitals have not shared to the same extent in the improvements effected inside them. The great point to be insisted on is that in all cases personal responsibility should be felt as regards puerperal fever. If adequate antiseptic precautions are adopted by the person attending a midwifery case, in the way especially of thoroughly scrubbing the hands and nails with soap and hot water, and subsequently, after rinsing off the soap, scrubbing them in a solution of corrosive sublimate 1 in 1,000 *before* making any examination, then the mortality from puerperal fever will steadily decline outside lying in hospitals as it has done inside them—and not till them.

The Habit of Dirt-Eating in Children.

A very interesting paper on this curious habit is contributed by Dr. John Thomson to a recent number of the Edinburgh hospital reports. He gives some account of the habit as observed by travellers in different parts of the world, and by agriculturists among unhealthy young animals, especially lambs. Dr. Thomson finds it occurs in two classes: (1) In cases of ill-health from tuberculosis, etc., anæmia being almost always a prominent symptom; and (2) in healthy children, the habit being formed in infancy and disappearing spontaneously when the children are about three years old. Dr. Thomson regards the habit in this latter class as analogous to thumb sucking, perpetual rocking to and fro, or constant rolling in bed, in which some children find delight, and which they lose when they pass out of infancy. In the cachetic cases, it has been thought that the habit might be started by an instinctive craving for earthy salts, such as lime and iron, but the evidence is not conclusive.

Dr. W. J. Jones, Jr., formerly a successful practitioner of Goldsboro, is now located in Wilson, N. C., the change recently taking place. The JOURNAL goes with him to his new field and wishes him much success.

Resection for Disease of the Anterior Lobe of the Brain.

Durante reported at the recent Medical Congress held in Rome, the case of a man who had suffered for some time from pains in the head which were at first lessened by antisyphilitic treatment. Later prominence of the left fronto-parietal region, exophthalmos, and amblyopia came on. The man's memory had diminished, and he became melancholy and unsociable; he also had hallucinations. A semicircular osteo-cutaneous flap was made, and the part trephined. Three hard syphilitic gummata were removed from the frontal lobe. Next day the man's vision returned, and eight days later the intellectual and moral faculties returned to their normal condition. The headache disappeared. Six months later he had an attack of Jacksonisn epilepsy, probably due to post-operative meningo-encephalitis. The second case was that of a woman previously shown at a congress held in Perugia suffering from loss of memory of words and things, religious perversion, altered moral sense, etc. Upon operating a fibrous adherent body was found and removed. The patient changed as if by magic, and speedily recovered her intellectual and moral faculties, and left the hospital cured Two months later slight epileptoid attacks occurred, probably due to slow inflammatory processes. The author dwells on the advantages of an osteo-cutaneous flap in these cases. Maffucci mentioned 5 cases confirming the view that the frontal lobe is the seat of ideation.

Chronic Bronchitis.

Dr. Arthur Davies at a recent meeting of the Hunterian Society of London, read a paper on the Treatment of Chronic Bronchitis. He alluded to the many drugs which had been employed in the treatment of this disease, but he now emphasised the value of the spray method. This was carried out by frequent administrations of ipecacuanha wine, three to four times a day. At each sitting from half a drachm to one drachm of the drug was used, but the patient was directed not to swallow the wine. Successfu cases were quoted. These showed relief from difficulty of breathing and lessening of the expectoration. The disadvantages of the inhalations were that sometimes vomiting followed and if the drug were used pure spasmodic dyspnœa would sometimes come on, and it was not suited for cases of asthma. Dr. Davies had tried a spray of potassium iodide with encouraging results. The class of cases suitable for treatment with the ipecacuanha spray were early cases with much dyspnœa and tenacious sputa. He had also found much help from the administration of trinitrine, the dyspnœa especially being relieved. When the dyspnœa was moderate tar in various forms was found useful.

How to Use Milk.

Milk is a fluid which readily coagulates in the stomach and forms a curd. Now, the curd of the milk of different animals differ much in its constituency, hardness, and digestibility. Cow's milk forms a very hard, indigestible curd compared to that obtained from the milk of the ass, for example. All milk coagulates when acted on by the gastric juices, so that Nature is careful to provide this fluid in such a form that it can only be swallowed in driblets, and after complete mixture with the saliva. While water is provided in running streams and ponds and lakes and seas, so that men and animals alike can drink themselves full in deep draughts, milk is provided in reservoirs, called udders, from which it can only be obtained in tiny streams by much pulling at a teat. This gives the key to the whole position. In order to use milk properly, and in such a way that it can be readily digested and assimilated, it is necessary, firstly, to dilute it, and, secondly, to imbibe it in driblets. This practical method of carrying out these principles is to take half a pint of new milk, freshly drawn from a healthy cow, add to it half a pint of distilled or boiled water, or a little less of rice water, or wheatenade, or oatenade, and then to sip it, or in case of invalids, to suck it, like cocktail, through a straw or glass tube. There are many people who are gradually dying of starvation because they can digest nothing who would be restored to a considerably increased standard of vitality if they would only learn the proper method of using milk.

Beer and the Kidneys.

Dr. Bollinger, director of the Anatomico-Pathological Institution in Munich, asserts that it is very rare to find a normal heart and normal kidneys in an adult resident of that city. The reason for the kidney disease is the tax put upon these organs by the drinking of excessive amounts of beer, and the cardiac hypertrophy and degeneration are secondary lesions for the most part. Formerly, the population of the city was recruited by accessions from the country, but the abuse of beer has spread now to the rural communities, so that this source of healthy new blood is cut off.

Syphilitic Nephritis.

Doerderlein, according to the Dublin Medical Journal, says that the occurrence of nephritis in secondary syphilis has always been looked upon as an open question. In the following case investigated in Birch-Hirschfeld's laboratory, the changes in the chief organs of the body were like those found in the kidneys. A patient, aged 19, contracted syphilis in 1895, and had a characteristic eruption. Some nine months later the urine became less in quantity, and contained a little albumen and casts. The patient shortly died in coma. In the lungs and lymphatic glands there was evidence of induration, in the liver an apparently already gummatous induration, and in the kidney a subacute interstitial nephritis. Before admission the patient had attacks of shivering, night sweats, and general *malaise*, undoubtedly due to an acute exacerbation of secondary syphilis. The case was complicated by an eruption occurring after three injections of mercury, and constituting a mercurial erythema. The patient must have had an idiosyncrasy to this drug. The nephritis, however, the author maintains, could not have been of mercurial origin, for it would have been parenchymatous and not interstitial, nor was it it due to the erythema, because this latter had not lasted long enough. The opinions concerning nephritis in secondary syphilis differ. Wagner found similar changes to those present in the author's case. The characteristic change in the organs was induration due to interstitial overgrowth. Probably a toxin produced these interstitial changes. Notwithstanding the diminution in the urine, it contained but little albumen and few casts and no epithelium. The albuminuria frequently occurring in secondary syphilis and favourably influenced by mercury are in all probability mostly referable to the form of nephritis described above.

The Protective Inoculation of Man against Enteric Fever.

Pfeiffer and Kolle have recorded in the Edenburgh Medical Journal the results of researches into this subject. They first refer to Haffkine's investigations into the protective inoculation against cholera. Pfeiffer and Kolle have already proved that the blood of typhoid convalescents as well as that of animals possessing an active or passive immunity against this infection, presents analogous relations to those found in Asiatic cholera. The blood contains specific bactericidal products. There is wanting also in the blood serum of typhoid convalescents the specific typhoid poison present in the bacterial cells. Considering the good results obtained in cholera, it became desirable to investigate the effects of the introduction of a small quantity of killed typhoid bacilli in man. The authors used a typhoid culture which had been made from a spleen two months previously, and the genuine character of which was proved by the specific reaction with the blood serum of typhoid convalescents. The virulence of the culture was very marked. Individuals were selected who were either in good health or at least free from febrile symptoms, and who were known not to have had enteric fever. One c.cm. of a bouillon preparation so completely sterilised at 56° C. that it conlained no living micro-organisms was injected. A few hours after the inoculation the first symptoms appeared of shivering, vertigo, etc. The evening temperature rose to 38.5°, but it fell to normal during the following day. From their experiments with it on animals it became obvious that a single injection of a minimum dose of killed typhoid cultures induced in man a specific change in the blood, which was apparent six days

after the injection, and which attained at least the same degree as is visibie in typhoid convalescents. It is more than probable that the appearance of specific bactericidal substances in the blood of individuals who have had typhoid fever represents the chief cause of the immunity possessed by them. If this is correct, then it is to be expected that these pro phylactic inoculations with killed typhoid cultures can produce an immunity of equal intensity and duration as that found after an attack of typhoid fever. Haffkine's analogous, very numerous, successful, and practical investigations lend support to the same view. The authors hope that these protective inoculations against typhoid fever will be of practical service under certain circumstances, such as the prevalence of a severe epidemic, etc. The material for inoculation can be provided with comparative case. They refer especially to its possible value in cases of sieges when enteric fever often decimates an army. Baieger, Wassermann, E. Fraenkel have used killed typhoid cultures in the treat ment of enteric fever, but not for its prevention. Individuals with typhoid fever react quite differently from healthy persons, but even in the developed disease such injections have been known to produce a beneficial even though temporary effect.

Anti-Spitting Laws.

The Pacific Medical Journal, January, 1897 edition has a very interesting Editorial, Entitled Anti-Spitting Laws. The Editor says:

Civilization is measured, not only by the standard of knowledge which a people may possess, but there must be added to this a general observance of the laws of politeness. In older and more refined centers of civilization daily intercourse among the people is marked by good breeding. Foul and profane language is rarely heard on the streets or smoking and spitting seen. It was a very general custom among the people of California in earls days to go about the streets well armed. Flannel shirts and broad brimmed hats were accepted as the proper mode of dress. Those who in daily conversation did not emphasize their remarks with an abundance of oaths were in the minority. Hats were rarely removed as an act of courtesy. Gambling houses and bawdy houses flourished on every street, and with wide open portals. Yet how great the change which has come about in a very few years, the refining influence of women and the natural courtesy of our pioneers soon revolutionized the manners and customs of these times. As profanity with other evidences of bad manners has gradually vanished, and marks of greater refinement are everywhere seen, so may we expect that the spitting habit will in a like manner disappear. It is generally acknowledged there are more smokers to be seen on the streets of San Francisco than in any other city of the United States, and since the majority of smokers are spitters who never have any regard for the place where they spit, the sidewalks around cigar stores and hotels especially are literally spotted with the marks of the chronic spitter.

When nearly one year ago, this journal commenced its crusade against the filthy spitting habit, we felt that we should have an up hill task educating the community to the point when they would demand anti-spitting laws. Sooner than we had any reason to expect, this work has borne fruit. Daily and weekly papers all over the State have taken hold of the subject, and have so aroused the people to the dangers arising from indiscriminate spitting in public places that several cities have enacted stringent anti-spitting laws. Sacramento and Oakland in particular have shown an earnestness most commendable; Dr. Sarah Shuey, a member of the Oakland Board of Health, has drawn up an ordinance which she expects will be favorably acted upon by the Board, and there are indications that San Francisco is about to fall in line. It is reported that the police in both of these cities say that if ordered they will arrest any person thus seen defiling public places. There are those who are now endeavoring to prove that there is no danger that consumption can be spread in this way, that it is only a foolish scare. Several of these writers live in sections of the State where consumptives are welcome, and they tell us that the idea that it is danerous to travel in the same car and live

in the same house with a consumptive is wholly erroneous. As a matter of fact whether disease is or is not spread by indiscriminate spitting, the habit is nasty and vulgar, and one of which no gentleman should be guilty. It is purely and simply a habit of which any person can easily break themselves.

Recent Discoveries as to the Essential Fungus in Ringworm.

The discovery of the trichophyton was announced by Gruby in 1841. The class of fungus to which it belongs is still uncertain. Declaux and Leslie Roberts cultivated the trichophyton fungus outside the body, and the latter observer reproduced the original disease by inoculation. Sabouraud, however, has made great advances in our knowledge of the subject within the last few years. He showed that the two chief varieties in man were a large-spored (megalo-sporon), and a small-spored (microsporon), the two never being found together on the same head. His conclusions may be stated as follows:

1. The small-spored tinea fungus (Micro-sporon Audouini) is by far the more common in children, being met with in two-thirds of the cases. Its mycelium tubes grow in the substance of the hair, but the spores form a dense "mosaic" layer or sheath round its shaft. There are few species of the micro-sporon, and, with the exception of one found upon the horse, they are human parasites. It is the common fungus of the scalp ringworm and is rebellious to treatment.

2. The large-spored variety has many species, and is contracted by man from various lower animals, as the dog, horse, or cat. It is essentially the fungus of ringworm of the beard and of the smooth parts of the skin. As a general rule it is much more readily overcome by treatment than the small-spored forms.

These researches, which proved the plurality of the ringworm fungi, have been extended by many observers. In England, Adamson has published a capital account of his work in that direction, which in the main confirms the conclusions of Sabouraud. He finds, however, that the small spored variety is by far the more common in England, for it occurred in 273 out of 178 scalp cases, the remaining five being large spored. In a later account he stated the proportion to be 95 per cent. in 263 consecutive cases. When cultivated outside the body in an artificial medium (Sabouraud uses a peptone maltose agar-agar) the micro sporon shows a downy surface and white color, whereas the megalo syoron has a powdery surface with branching rays and often a yellowish tint.

Notwithstanding these recent additions to our knowledge, no great advances have been made in treatment. The main difficulty in the treatment of ringworm is a mechanical one, the fungus burrowing into the substance of the hair, as well as into the hair follicles and deeper layers of the epidermis, where it is beyond the reach of parasiticide remedies. A large spored patch on skin where the hair is rudimentary (lanugo), as at the back of the hand, may often be cured with a single application of tincture of iodine. In the same way a megalo sporon patch on the scalp may be sometimes rapidly cured. But take a chronic ring on the head, where the hair has broken away, leaving only a scanty stubble of dark stumps, and one may paint on iodine day after day for a month with little effect. In the last-mentioned case the fungus has got into the roots of the hair and the deeper layers of the surface skin. In fact, to cure a chronic ringworm requires a large amount of resource, together with the utmost patience and thoroughness of treatment. Considering the infectiveness of the fungus, and the ease with which its myriads of spores may be spread about, the wonder is that this pest of mankind is not far more universal.

Gall Stones.

Dr. Bueno de Mesquita (Islington Med. Society) read the notes of a case of Gall-stones treated by Olive Oil. The patient was a woman aged forty years who had suffered for two years from frequently recurring attacks of colic characteristic of gall-stones. She was put on olive oil, of which she took six ounces per day. From the time the treatment was started the attacks, which had been very severe, ceased entirely and had never reappeared after a lapse of one year. After taking

the oil for three months the patient noticed a large quantity of pigmented powder on the surface of her motion. This she collected, washed and dried and brought to him. On microscopical examination it was found to consist of cholesterine crystals. The original specimen was shown to the society, and consisted of well defined glistening crystals. The case was interesting, as it demonstrated the way in which the oil had acted upon the stone—namely, by dissolving it, thus facilitating its passage along the ducts.

Intussusception.

Rydygier (The Clinical Journal) has been able to add eighty-four new cases to thesixty-six collected by Braun. Operative interference is as important in intussusceptionas in strangulated hernia. Rydygier always makes two attempts at reduction by the injection of water, and this failing, proceeds to operation. The formation of an artificial anus is only to be recommended in case of threatening collapse, for only two cases have recovered after such treatment. Entero-anastomosis is also to be excluded, for it leaves the disease unattacked. Disinvagination gives the best results, but, this failing, the Jessett-Barker method of resection is probably the best. The advantages of this method of resection are: (1) A small amount of intestine only is sacrificed; (2) the tying off of the mesentery is accomplished in one stroke; (3) the suture is applied in the shortest possible time. In cases of acute intussusception the author arrives at the following conclusions: (1) Operation must be done as soon as possible after the failure of careful bloodless methods; (2) after laparotomy, disinvagination is the method of election; (3) were disinvagination cannot be accomplished, resection is to be performed; (4) the entire mass is to be resected when the invaginating sheath shows marked changes, or where perforation is feared; (5) the formation of an artificial anus and entero-anastomosis are only justifiable when there is imminent danger of collapse. Chronic intussusception should be treated on similar lines, and temporising without good reason is bad practice, as acute changes may develop.

Alcoholism in Children:

M. Lancereax, has rcorded two very important observations showing the pernicious influence of alcoholism in children upon their development. One case was that of a girl between thirteen and fourteen years of age, whose parents were drunkards, and who had been accustomed to drink half a litre of wine daily ever since she was three years old. She had the appearonce of a child of eight years. Her liver was enormous, spleen enlarged, ascites was present and she was in a uremic condition. The other case was likewise that of a daughter of alcoholic parents. Though fourteen years of age she seemed scarcely six. From an early age had habitually drunk wine diluted with water, from her seventh year she was accustomed to drink chartreuse and other liquors, "to fortify her stomach." She, too, had an enlarged liver and spleen, and presented symptoms of uremia. Moreover she showed manifest signs of a neuritis with atrophy of the lower extremities. Laboratory experiments upon the young of rabbits have fully confirmed this action of alcohol upon the growth, and this special effect should be remembered and included with the influences of alcoholism upon the increase of crime, idiocy, and insanity. There seems to be a constant relation between the steady increase of alcoholism and the diminution in the average height, to which attention has been called by several observers.

Sanmetto in Gonorrhea.

Dr. A. G. McCormick, Richmond, P. Q. Canada, writing, says: "I prescribed Sanmetto in a recent severe case of gonorrhea with the greatest satisfaction. I never prescribed any remedy in such cases that acted so well. The case was one of simple gonorrhea, of a severe type—pain, burning and scalding, with a profuse discharge. By the use of Sanmetto my patient made a rapid and satisfactory recovery. Sanmetto is a sovereign remedy in such cases. I used it two years ago in a like case with a similar result. I am well satisfied that Sanmetto is by far the surest, speediest, and safest, as well as the most pleasant and most satisfactory remedy we have for gonorrhea."

Perforating Appendicitis Associated with General Peritonitis.

Mr. Mayo Robson at a recent meeting of the London Medical Society, read a paper on a series of cases of Perforating Appendicitis associated with General Peritonitis in which he related in detail six cases of general peritonitis on which he had operated during the past year, five of which had recovered after free lavage drainage of the abdomen. He also referred to all the cases of appendicitis on which he had operated during the same period, twenty in number, out of which nineteen had recovered. He said that he preferred to adopt the simple classification of acute and sub-acute, or, what amounted to the same thing, catarrhal and suppurative, rather than the more complicated classifications advocated by several surgeons. He thought the most important points to settle in any given case of appendicitis were whether or not operation ought to be done, and if so, when? He thought the method advocated in America of operating as soon as appendicitis was diagnosed would lead to a far greater percentage of recoveries than the method of individualising which we adopt in England, because not only his own experience but that of many other surgeons had indubitably proved that the removal of an appendix before suppuration, perforation, or gangrene had occurred was practically unattended by risk, and the operation could be done through a small incision by separation rather than division of muscular fibres, thus avoiding subsequent inconvenience from hernia. Catarrhal appendicitis was the variety which furnishes the recurrent form, and these were the cases that as a rule recovered without operation. He referred to one of his cases which showed that whilst a first and second attack may be catarrhal and end in resolution the third may assume the perforative form, ending in general peritonitis. Hence in the catarrhal form he advocated operation after a second seizure, as should a second attack occur it was almost absolutely certain that other seizures would follow. In the suppurative form which might occur with or without perforative, or with or without gangrene, he thought operation ought always to be advised at the earliest possible moment. He said that he had never regretted operating, but he could point to several cases where delay at the request of the patient or his famliy had led to a fatal termination. He remarked that he always looked on an acute onset with a rapid pulse and tenderness over the appendix without the presence of tumour as indicating need for immediate operation. A more gradual onset, with a quiet pulse and the early formation of tumour, were signs that delay might be safe. If in the course of an appendicitis in any stage a rigor with rise of pulse or temperature should occur operation ought to be advised, as it indicated septic absorption. The temperature alone he thought of very little assistance, the pulse being the true guide for treatment.

Opium might so disguise the pulse rate as to lead to serious or even fatal delay, so that it should be avoided if possible; or if an opiate had been given it might be advisable for the surgeon to reserve his opinion for a few hours until the sedative effect had subsided, when, i the pulse had increased in frequency and anxiety of countenance had declared itself, operation would be advisale. Relief or cessation of pain with a marked rise in the pulse rate he thought an indication for immediate operation, as it not infrequently indicated gangrene. Distension of the abdomen with vomiting and rapid pulse were signs that admitted of no delay, as they indicated extending or general peritonitis. Speaking as to the time when operation should be done, he thought the quiescent period, as advised by Mr. Treves, was best in the sub-acute or catarrhal form and in the acute variety the earlier the operation was done the better. With very few exceptions the diseased appendiq should be removed, as if it was left it was apt to excite fresh attacks, as shown in several cases in his list. The appendix might be removed safely in many of the suppurative forms if the absccess cavity was thoroughly exacvated and cleaned before making the search, as the apyendix was usually either in the wall of the abscess or even lying in the abscess cavity; it could then be easily taken away without seriously disturbing the adhesions, and even if the adhesions were broken down and the cavity had been cleansed no harm as a rule followed, though he did not advocate

a prolonged search if the appendix was not readily found. Speaking of general peritonitis associated with appendicitis he said that we ough to give the patient a chance even in the most extreme case. He advocated in such cases very free irrigation of the abdominal cavity with plain boiled water or weak boracic lotion, afterwards employing very free drainage by several large rubber tubes.

Swine Fever.

McFadyean, in a paper on Swine Fever read before the Pathological Society of London said the organism which is the cause of this fever is a small bacillus which in point of size and form closely resembles the bacillus of glanders. In natural cases of the disease it appears to be constantly present in the large intestine and in the mesenseric glands; in very acute cases it is also present in the blood in small numbers, though it is seldom or never demonstrable in that fluid by microscopic examination. The bacillus is motile and aerobic. It can be cultivated in most of the ordinary artificial medin, thougn its growth is very meagre in gelatin. It does not form a visible growth on potato. Its most characteristic mode of growth is exhibited in gelatin-agar, in which its colonies have a very distinctive cloudy aspect. Its growth is very slow at ordinary summer temperatures, and best at, or near. the body temperature. In artificial cultures the bacillus is promptly destroyed by desiccation; it is also destroyed by a ten minutes exposure to a temperature of 58° C. There is every reason to regard the organism as an obligatory and not a facultative parasite. The common method of infection in natural cases of swine fever appears to be the ingestion of bacilli voided with the fæces of animals previously attacked. In very acute cases dying within two or three days after infection the only lesions discoverable at the necropsy may be an intense gastritis and enteritis without anything to distinguish these lesions from those produced by a purely chemical irritant. In the great majority of cases, however, the lesions are very distinctive, and the cæcum and colon are the most constant seat of them. The commonest form of the intestinal lesion is a well-defined circular necrosis involving the whole thickness of the mucous membrane and sometimes extending deeper into the wall of the bowel. Next to this in frequency comes a diffuse diphtheritic lesion; this is, in reality, a superficial necrosis with deposition of a thin layer of fibrinous exudate on the surface. All gradations are to be found between the well defined circular necrosis and the diffuse diphtheritic lesion. Either form of the lesion may end in complete recovery; if the pig survives after the detachment of the circular slough the ulcer generally heals up and leaves a smooth, depressed cicatrix. In very chronic cases the necrotic piece of mucous membrane sometimes remains in position, while a reactive inflammation at its base leads to the production of a projecting, tumour-like structure. In a considerable proportion of cases the small intestine is also the seat of lesions, which here again take the form of either a diffuse diphtheritic inflammation or of well-defined circular necroses, which promptly become converted into small circular ulcers. In comparatively rare cases necrotic lesions are found on the tongue or tonsils, or in the liver or spleen or mesenteric lymphatic glands. Contrary to what has been stated, pneumonic lesions are found in only a very small proportion of cases of swine fever and in most, if not all. cases complicated with pneumonia the organism which is responsible for the lung lesion is not the swine fever bacillus. In artificial culture the virulence of the organism is retained through many successive generations. Pigs may with great certainty be infected by feeding even with moderate quantities of the swine fever bacillus in culture, and the lesions thus produced are indentical with those which foliow infection with such materials as ulcerated swine fever bowel. Cultures on slanting agar were shown which were made on the previous day from a pig killed five days after infection with 40 c.c. of a bouillon culture which was the fourteenth generation from the mesenteric gland of a pig. With regard to the possible transmission of the disease to the human subject it was said on *a priori* grounds that this appeared highly improbable. During the last ten years about 300,000 pigs had been killed

in this country suffering from swine fever and with such abundant opportunities for infection it seems highly probable that many cases of transmission to the human subject must have occurred had that been possible. The disease has never been observed to spread to other domestic animals, although the opportunity for it to do so was very frequently present. It appeared probable that the so-called ulcerative colitis of the human subject was in no way causally related to swine fever, though the possibility of such a connexion has been suggested.

The Chemical Changes Which Take Place on Heating Milk.

Dr. Macphail states, "When a temperature above 166° F. is applied to milk, then the changes ineident to boiling commence. The fat globules are broken up and the fat is liberated, the lactalbumin is coagulated, and changes occur in the milk sugar and casein."

Dr. Richmond says, the following statement is more in accordance with the facts. "When milk is raised to such a temperature (certainly below 160° F.) at which evaporation takes place to an appreciable extent from the surface, and at which the cream rises quickly, the larger fat globules have a tendency to coalesce, and fat is liberated in visible globules. Lactalbumin as sueh does not exist in milk; the alkaline salts of soluble lactalbumin are converted into the alkaline salts of coagulated lactalbumin, which are still soluble and do not appear to be difficult of digestion. The milk sugar is somewhat changed by the action of the alkaline salts in milk; its carbohydrate constitution does not appear to be seriously affected, and the change is not rapid. The casein is unchanged, or so slightly changed that the alteration cannot be detected unless the milk be alkaline, when a portion of the sulphur ia removed as sulphide. At high remperatures a deposit of calcium citrate occurs, causing loss of both lime and citric acid. Owing to the deficiency of lime in boiled milk the action of rennet, which produces from casein (in solution as calcium caseinate) the calcium salt of dys-chymocaseose (eurd), is modified."

All these changes take place below 177° F., and the difference between milk pasteurised at 167° F. and milk sterilised at 212° F. is one of degree, depending on the length of time the milk is kept at the temperature named, not of kind.

"Trade-like" Movements Following Head Injuries.

Dr. Miles (Edenburgh Medico-Chirurgical Society, Dec. 2, 1896,) read a paper on "Trade-like" Movements following Head Injuries. In his paper Dr. Miles gave an account of several cases of severe head injury in which the patients showed the performances of regular and coördinated movements, which were found to be simply certain movements which they had habitually performed in working at their respective trades. The first case was that of a plumber aged twenty years who fell from a height of sixty feet. He sustained a scalp wound, but was believed to have no fracture of the skull. One of his legs had to be amputated owing to great crushing of the limb. He became restless and delirious, and kept continually making movements which a fellow workman described as those used in beating out lead. Before his death (three days after the accident) his mental state improved, but the movements persisted more or less. The post-mortem examination showed numerous ecchymoses into various parts of the brain and no fracture of the skull. The next case was that of a sculpter who fell from a scaffolding a distance of thirty or forty feet. Immediately after the accident he became so violent that it was necessary to inject hyoscine hypodermically. He presented two scalp wounds and evidence of a fracture of the spine. After the hyoscine had been administered he bacame quieter, but for some hours he was observed to move his arms in the rhythmical movements of a sculptor at work. He died ten days after the receipt of his injuries, and post-mortem it was found that the cord was completely torn across by a fracture–dislocation in the dorsal region. There was no fracture of the skull, but the brain substance showed numerous small hæmorrhages in different parts. The third patient was a man who fell to the ground from a ladder while painting a sign-board. He survived his injuries, but for some

time was completely blind. Before recovering consciousness he used his hands in painting imaginary sign-boards on a screen beside his bed. Remarking on these cases Dr. Miles pointed out how much similarity there had been in the post-mortem appearances in the two fatal cases. In the brain of each there had been hæmorrhages into the right occipital lobe, the angular gyrus, the surface of the motor areas, and into the the frontal lobes. Dr. Miles did not believe that the symptoms could be ascribed to any one of these lesions. He believed that the delirium after the accidents had been due to the anæmia of the brain which the concussion gave rise to, and that this anæmia together with the hæmorrhages had brought about a condition of instability of the nerve cells. The cells in their unstable condition were much more sensitive to stimuli and it seemed natural that those cells which were most constantly in use in discharging nerve energy should be the most sensitive of all. The first two cases showed other symptoms besides the "trade-like" movements which he thought might be explained in the same way. The patients in the stage of delirium failed to recognize those standing round them and addressed them by the names of near relatives. The failure of the patients to recognise their friends was probably due to the slight lesions present in the angular gyrus and in the occipital lobe, the while the tendency to produce the names of those with whom they were most familiar was probably, as in the motor areas, an indication of the unstable condition of the cells in the visual centre, leading them to recognise those whom they were most accustomed to see.

Latent Gout of the Menopause.

Dr. Armstrong has noted patients presenting at the time of the menopause some or other of the following symptoms:—[1] increasing stoutness with muscular flabbiness; [2] puffiness of the hands and feet; [3] mental and bodily lethargy; [4] shortness of breath on exertion with cardiac debility; [5] irritability and restlessness; [6] broken and disturbed sleep; [7] a feeling of weariness on rising in the morning; [8] dyspepsia, flatulence, constipation, and migraine; [9] various neuralgiæ, especially of the back of the head and neck; and [10] lumbago and vague muscular pains. The quantity of urine was often diminished, while at other times the patient pased large quantities of pale urine of low specific gravity. Urates were often present and nearly always uric acid in excess. At first he regarded these symptoms as neurotic; but seeing how often they were present in neurotic forms of gout he decided to try treatment adapted for this complaint. The objects of his treatments were as follows:—[1] To eliminate the waste products from the blood by means of [*a*] the skin, [*b*] the kidneys, and [*c*] the liver and bowels; [2] to disturb and disperse the morbid products in the lymph spaces, lymphatics, and muscles; and [3] to improve the state of the nervous system, especially the sympathetic portion of it. He has been much surprised and gratified by the good results he obtained from such treatment. For the first purpose he ordered the drinking of hot water or natural thermal water, and the box vapour bath; for the second purpose he used massage, or the aix douche (douche massage), or mud baths, or, if these were contra indicated, resisted Sweedish exercises; and for the third purpose he recommended especially electro-massage. The general treatment includes regulated exercise and a selected diet, the carbohydrates being eliminated as far as possible. In some cases the Salisbury diet gave good results. Local pelvic treatment should be carried out when required.

Gynæcological Treatment of Rheumatism and Gout.

The British Medical Journal says that Bossi has recorded three cases illustrating the influence which the female genital organs have over the interchange of materials in the organism. The most noteworthy of these was a patient aged 46 who had suffered the age of 31 from painful menorrhagia with intestinal and urinary disturbances. Nine years ago she had an attack of articular rheumatism, and now at each menstrual period she had gouty manifesitations in the joints with scanty high-coloured urine, dyspepsia, etc. She was very anæmic, and all the

small joints were swollen and deformed. The uterus was enlarged and prolapsed, and a scraping from the interior suggested sarcoma. The uterus and ovaries were removed by hysterectomy, and immediately the joint condition began to improve, and the quantity of urine and of urea during the succeeding month was more than quadrupled. The patient also gained nearly a stone in weight, and traces of tophi were no longer to be found in the joints. In another case vaginal hysterectomy for fibroma of the fundus uteri led to a notable increase in the amount of urine and in its urea and to the disappearance of the articular pains In yet a third patient rheumatic symptoms disappeared after the curettage of the uterus for endometritis hyperplastica. These observations the author advances simply as a preliminary note, but thinks that taken along with the recent researches of Curatulo and Tarulli and the results of castration for osteomalacia they demonstrate the influence exercised by the genital organs over the body metrbolism.

Some Points in Abdominal Surgery.

Dr. Tresidder at a recent meeting of the Nottingham Medico-Cherurgical Society read a paper on Some Points in Abdominal Surgery. Referring to shock in operations on the peritoneum he first drew attention to the peculiarities of the peritoneum—viz., its considerable surface its great sensibility, its remarkable powers of absorption, and its wonderful powers of healing. The amount of shock in operations on the peritoneum, among other things, would depend on [1] whether it had been previously operated on; [2] the region of the operation ; and [3] whether the membrane was inflamed. With reference to abdominal cysts he thought that it was important clinically to ascertain [1] whether they were unilocular or multilocular; [2] whether they were pedunculated or sessile; and [3] whether adhesions existed. In the treatment of cysts deep in the pelvis he had found Trendlenburg's position very valuable. Lastly, with referrence to uterine cancer. He had recently performed four operations of vaginal hysterectomy for cancer; in two of these mental complications had occurred, one patient dying from melancholia and the other with recurrence with marked mental depression; the remaining two patients were alive, but one now had recurrence, five months after the operation, and the other was well still, eleven months after. He considered that the limits of complete vaginal hysterectomy were very narrow, and he now perferred supra-vaginal amputation of the cervix, as mental complications were much less likely to follow this operation and, moreover, anatomically the disease tendered to spread not upwards to the body of the uterus but in the line of the lmphatics outwards into the broad ligaments.

Should the Internal Use of Atropine be Discontinued ?*

Lèpine calls attention to the fact that more deaths have followed medicinal doses of atropine than of any other drng. If possible, therefore, other drugs should be substituted for it. Atropine has been used in the following diseases: (1) Neuralgia and other painful affections. Considering the large number of analgesics available, it should be used in the present day in exceptional cases only for example in angina pectoris. (2) Whooping cough and asthma. If the cases are severe and have resisted all other treatment, atropine may be tried. The same applies to (3) epilepsy. (4) It is very doubtful whether it is of any use in hysteria, paralysis agitans, and other tremors. (5) Chronic constipation. As there are plenty of substitutes, its use should be discontinued. (6) Lead colic. In this the subcutaneous use of atropine has more dis advantages than advantages. (7) Nocturnal enuresis. Great caution is necessary, since large doses are required as a rule. (8) As a cardiac tonic, and in those cases of permanent bradycardia which often end in epilepsy, atropine has been tried without much success in the latter cases, possibly because a slow pulse does not always correspond to a slowly acting heart. According to Dehio it may benefit slight cases of cardiac irregularity, but is without effect in severe. (9) In night sweats it acts well, but although small doses tend to prevent collapse, which is common in phthisical patients, larger ones increase the liability to it. To begin with

*Abstract from the British Med. Journal.

a dose of $\frac{3}{200}$ gr. is unjustifiable in advanced cases of phthisis. (10) In chronic hypersecretion of HCl by the gastric mucosa several observers have found that atropine diminished the secretion, but others deny this. However, considering the bad effects of this hypersecretion on the gastric mucosa, in the present state of our knowledge atropine must still be tried. (11) Some observers state that atropine, given hypodermically, arrests hæmorrhage (hæmoptysis, etc.) by its action on the arterioles. (12) The injection of atropine before the administration of chloroform to prevent syncope has been given up by surgeons. (13) It has been recommended as an antidote to barium salts, hydrocyanic acid, nicotine, pilocarpin, veratrin, and muscarin poisoning. (14) The question of its use as an antidote to opium is left by the author for a further communication.

Thrombosis in Typhoid Fever.*

Dr. Gostling called attention to the subject of thrombosis in typhoid fever, pointing out that the ordinary textbooks gave a very scanty account of it, and did not sufficiently emphasise its importance and dangers. From cases which were given in some detail the writer showed that thrombosis might be a sequel or a complication. When it occurred as a sequel—that is, after the temperature had become normal, the disease having run a fairly typical course—the prognosis was much less grave than when it occurred as a complication. As a sequel, the symptoms of thrombosis, which occurred most frequently in the external and common iliac and femoral veins, were pain and tenderness in the affected limb, with swelling and œdema, the vein being felt as a solid core. In such case the temerature would rise again slightly, the evening temperature averaging say 100°, and the morning temperature 98.5 or 99°. This might continue for a week or ten days. The case might, however, be trusted to do well. When, however, thrombosis occurred as a complication—that is, before the primary fever had ceased, or in the midst of a relapse—it was a most grave condition, and influenced the prognosis most seriously. The danger appeared to be the breaking down of the clot, with consequent pyæmic symptoms. Rigors might be looked for, and would probably be repeated; the temperature ran a most irregular course; pulse frequent and irregular, respirations irregular, mental condition at first apprehensive of death, later completely apathetic. Death occurred in the large majority of such cases. Notes of *post-mortem* examinations of three cases were read. In one of these, in which the femoral external iliac and common iliac veins of the left side were filled with clot, which symptoms (pain, tenderness, swelling) during life, although they had been constantly looked for, but the general symptoms described had been present.

*South Eastern Branch, British Medical Association, Dec. 10th 1896.

Acute Intestinal Obstruction.

On Dec. 11th, 1896, Dr. M'Ardle read a paper with this title before the Royal Academy of Ireland. The cases quoted were forty-one in number, of which seven were fatal, and included instances of obstruction by bands, itussusception, volvulus, acute enteritis, perforative peritonitis, and appenicular disease. M'Ardle pointed out that the delay occasioned by trying medicine and enemata often placed the patient beyond the reach of surgery. Prolonged medical treatment was not justifiable, because, as noted by Treves, of 1000 deaths from intestinal obstruction only sixty were from causes removable by medical means. The chances are all in favor of the obstruction being of such a nature that surgical interference can alone avail. It is therefore to be regretted that some modern writers advocated persistent efforts with enemata, even after dangerous symptoms had shown themselves. M'Ardle did not advocate indiscriminate laparotomy, but after calling attention to many cases of acute intestinal obstruction in his hospital and private practice in which death occurred before he had an opportunity of operating on the cases, he held that with the present safe methods of dealing with abdominal wounds and the rapidity with which Paul's tube, Murphy's button, and such appliances enable us to deal with lesions of the bowel, the intestines should be exposed much earlier and with greater frequency. The points on which greatest

stress was laid were—(1) that all fluids should be removed from the pelvis and loins by irrigation with sterile water; (2) that the circulation in the intestines should be restored and peristalsis established by irrigating with boiled saline solution before returning them to the abdomen; and (3) that a tube passed through the rectum should be guided by the hand within the abdomen until flushing of the colon could be thoroughly carried out, so as to reduce the intra-abdominal tension and assist the return of the protruded bowel. When a surgeon is called to a case of complete obstruction of the bowell which has resisted judicious medical treatment and in which evidence of peritoneal effusion exists it is his duty to operate at once.

The Effects of Influenza on the Heart.

Batz has published an instructive work on this subject in which he describes the cardiac complications of influenza and cardiac influenza, there being a distinction between the two. Under the first heading are included peri-, endo-, and myocarditis; while the second, a term due to Huchard, includes a much more complicated series of alterations in the heart's action through its nervous apparatus. The cardiac rhythm is more or less altered, there being acceleration of the beats, equalisation of both pauses, and both sounds come to resemble each other, a condition to which the term "embryocardia" has been given. Influenza would seem to be the disease in which this is most frequently met with, and its prognosis is very grave. The pulse very often become irregular in every way; it is frequently intermittent. There may be an extreme degree of bradycardia, the pulsations having been found as low as 15 to 16 to the minute. On the other hand a high degree of tachycardia has been noted by several observers. Extreme cardiac weakness, followed by syncope, is another frequent complication, but the author more particularly draws attention to influenzal angina, which bears a marked resemblance to angina pectoris, with which, indeed. it is probably identical, being produced under the same conditions, and accompanied by the same symptoms. There may be the same pain preceded by a kind of aura and a feeling of constriction of the chest. The duration of these sensations is variable, for the most part lasting some time. The author thinks that the variability of these cardiac affections depends on whether the vagi, the sympathetic, or intracardiac ganglia are affected, or they may even depend on a bulbar origin.

Prevention of Typhoid Fever.

Dr. Boobbyer, at the last meeting of the Nottingham Medico-Chirurgical Society, expressed the opinion that the nidus of the disease was almost certainly in the soil, and showed that its frequency had lessened contemporaneously with improved sanitation. He said that the common vehicles of its conveyance were mainly food and water. In country districts an outbreak could often be traced directly to the impure water supply, but in large towns the prime cause could rarely be discovered. Inquiry proved that the disease was conveyed to the residents and nurses in hospitals more frequently than writings showed. The local death rate from typhoid fever, which was high, had remained stationary for the last thirty years, and appeared to be influenced by the system of sewage disposal. In Nottingham 70 per cent. of the houses had pail closets, 1 per cent. middens, and 19.5 per cent. waterclosets. In the year 1865 87·7 per cent. of the cases of enteric fever occurred in houses with pail closets, 7·8 per cent. in those with middens, and 4·4 per cent. in those with waterclosets, but some allowance should be made for the situation and the class of people. The suggestions offered were—(1) the provision of hospital accommodation; (2) the warning of attendants as to personal cleanliness; (3) the substitution of waterclosets for middens and the removel of all household refuse daily; (4) the placing of a layer of concrete below every house.

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Sulfonal has been gradually abandoned in my practice. I am also apt to give Trional in divided doses, perhaps as high as 0.5 Gm. several times daily in melancholia, severe neurasthenia, hystero-neurasthenia and in cases of morbid fears. Trional is probably one of the best sedative and hypnotic drugs having a direct action, that is to say affecting chemically the central nervous system, which we have for melancholia, delusions, mild grades of mania as well as the neuroses. I have learned to specially prize it in chorea. In painful affections it is of very little service."

Insufficiency of the Bacteriological Diagnosis of Diphtheria.

Spronck (in the British Medical Journal) points out that although a bacteriological diagnosis of diphtheria is very easily and certainly arrived at, nevertheless cases exist in which bacteriologists disagree. Cultivation on serum, followed by microscopic examination, shows that there are three varieties of the diphtheria bacillus. On serum these are differentiated only by size; the short bacillus, however, closely resembles the pseudo-diphtheria bacillus described by German authors. As regards virulence the short bacillus is regarded as extremely benign, the intermediate as less so, and the long bacillus as the most toxic of all. It might be thought that the small bacillus described by French writers was identical with the pseudo-bacillus of German authorities, but doubt is thrown on this by the results of experiments on Guinea-pigs. Though benign, the small bacilli in cases under observation differed in their degree of benignity, though none of the animals affected died. The cultures used were in all cases pure. To determine whether or not two pathogenic specimens were true diphtheria bacilli recourse was had to anti-diphtheria serum. If the true diphtheria bacillus had been present, this should have been capable of protecting a Guinea-pig from ill effects. This was not found to be the case. Spronck concludes that there exists a pseudo-diphtheria bacillus, which is pathogenic to Guinea-pigs, hitherto unknown or mistaken for the short bacilius. Researches on the but slightly pathogenic pseudo diphtheria bacillus showed that in time the cultures lost their virulence, and when spontaneously attenuated could not be distinguished from Von Hoffmann's pseudo-diphtheria bacillus. This proves that the relationship said to exist between the latter and the diphtheria bacillus cannot be admitted without reservation. Probably Von Hoffmann's bacillus is derived sometimes from the true diphtheria bacillus, at other times from a slightly virulent pseudo-diphtheria bacillus. It seems justifiable to think that microscopic examination of the colonies is inadequate, and it is necessary to control the diagnosis by the experimental use of anti-diphtheritic serum.

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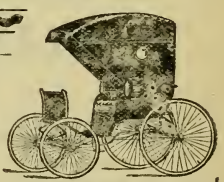

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Continued Fevers.

At the last semi-annual meeting of the Medical and Chirurgical Faculty of Maryland, Dr. C. Birnie, of Jamestown, read a paper on Continued Fevers.

He defined continued fever to be a fever lasting from two to six weeks, or sometimes longer, lacking the characteristic symptoms and lesions of typhoid or malarial fever and not due to any definite lesion.

The cause of this fever is not known. It has been known to follow fatigue, exposure to the sun, or wet, drinking stagnant water, anxiety and mental overwork. It is very rarely fatal in this latitude, and the few *post mortems* show no definite lesions. There have been no blood examinations so far as he knows. Of course there is a disturbance of the heat centres, but what causes the disturbance is not known; whether it is due to a microbe or to leucomaines, as DaCosta suggests, remains to be proved. The principal symptom is a continued fever, generally there is loss of appetite, often constipation and of course fever urine.

The diagnosis is by exclusion. It is most likely to be mistaken for typhoid fever, malarial fever, and epidemic influenza. It is distinguished from typhoid fever by the absence of all its distinctive symptoms, by its very low death rate, and by the fact that there is seldom more than one case in a family. From malarial fever by a microscopic examination of the blood, by the absence of any regular or decided intermission, and by the fact that antiperiodics have no effect on it whatever. From epidemic influenza it is diagnosed by the absence of any epidemic—it is neither contagious nor infectious—there are no bone pains, and few or very slight symptoms of catarrh of any organ. The prognosis is almost always favorable.

The treatment is symptomatic, hydrocyamic acid, bismuth, cracked ice, for the nausea; acid drinks, or an effervescent draught, large enemata; baths, wet packs or cold sponging, when the temperature rises too high. Antipyretics given to reduce the temperature, or to shorten the disease, are not only useless, but harmful; given in small doses, frequently repeated, they relieve headache when that is a troublesome symptom. Phenacetine, in doses of from two to four grains, does well.

The chief gains in making a correct diagnosis of this disease are to avoid useless medication and to save anxiety.

In the cities and among people who are wealthy enough to employ a trained nurse, it may make little difference, but in the country where people are dependent on each other for help in nursing, the presence of typhoid fever will often keep neighbors away. Then, at this time, when so many of our professional brethren believe that typhoid fever can be aborted or cured by purgatives and antiseptics, or by huge doses of antiseptics, it is surely a gain to suffering humanity if we can conscientiously abstain from giving them.

External vs. Internal Examination in Labour.

Dr. Ahlfeld, according to the London Lancet, is not inclined to return to the use of the internal examination in labour, neither is he in favor of an extension of the exclusive employment of the external. He thinks that the purpose to be attained is the improvement of both external and internal methods of examination, and the employment of them both for the advantage of parturient women. It is pointed out that the external examination *intra partum* is difficult to perform, and can only be reliable in the hands of specially skillful observers; further, it only enables us to diagnose a small number of the anomalies in labour, which may prove dangerous for the mother and child; and, again, the external examination, even when properly carried out, does not altogether exclude dangerous disturbances in the progress of labour. Instances are given in which the diagnosis founded upon the external examination alone was erroneous, and became a source of danger—for example, in one case it was believed that labour had not begun, and yet it turned out that the cervix was fully dilated and a well-marked caput succedaneum formed. At the same time the risks of the internal examination are well known; and therefore Ahlfeld sums up the matter in the advice given above—namely, to use and improve both methods.

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A Theoretical and Practical Consideration of Bianchi's Phonendoscope.*

By Charles L. Minor, M. D., Asheville, N. C.

Gentlemen:—I need make no apologies to an audience of Asheville physicians who more than most are interested in Physical Diagnosis, for speaking of Dr. Bianchi's new instrument, whose aim is to render more accurate the results of that all important branch of our calling and to assist us in the study of those morbid intra-thoracic conditions we here are so often called upon to treat.

The Phonendoscope has now been in use long enough to justify an attempt to estimate its true value, though we must wait for the lapse of several years of careful clinical testing before we can form a final judgment.

Certainly if only the smaller part of its inventor's claims can be thus verified it will prove an invaluable addition to our means of diagnosis.

The instrument consists of a chest piece, rubber sound conducting tubes nnd earpieces, and analyzed down to its essential principles is made up of an inclosed resonating body of air set into action by the vibrations of a thin convex disk of vulcanite which forms the proximal end of the chest piece and receives its impulse from the chest wall. These vibrations of the inclosed volume of air are conducted by the tubes to the observer's ears.

The ordinary binaural stethoscope, it is true, when its chest piece is applied closely to the body and the ear pieces in place, forms a closed body of air, but has the essential difference of the absence of any vibrating diaphragm closing its proximal end. It is then this diaphragm which is the chief feature of this instrument, receiving and transmitting by its vibrations much smaller and slighter sound waves than can be appreciated by the ordinary stethoscope and magnifying into audibility sounds which would be otherwise overlooked The soft and relatively poorly vibrating skin of the human body is thus advantageously supplemented by a highly elastic resilient membrane, which may be compared to the thin plates of pine used in musical instruments to intensify sound.

The similarity of the Phonendoscope to the Telephone is not difficult to see, in both the primary reception of the sound is by a resonating sheet of elastic material, which sound, in the case of the Telephone, is transformed into interruptions of an electric current carried by a wire to a similar resonator and there reproduced for the listening ear. In the case of the Phonendoscope however the vibrations of the disk are transmitted to an inclosed body of air and by that to the listener's ear without the interposition of a second diaphragm.

So much for its principle of action.

Its structure is as follows:

The chest piece consists of a heavy circular disk of metal about one-half inch thick, flat on one side, and hollowed out on the other into a shallow, basin like, cavity. Converging from the flat surface of the disk, and opening into the top of this cavity, are two holes destined for the conduction of the sound to the tubes. The cavity is made into a closed space by a thin disk of vulcanite, concave on its inner and convex on its outer surface, and kept at high tension by a spiral spring which is inserted between its inner concave face and the concave surface of the metal disk.

Into the two holes are fitted from the flat surface two short metal tubes to the outer ends of which are attached the rubber sound conducting tubes, as in an ordinary stethoscope, and which end in small and peculiarly shaped ear pieces, designed for their easier retention in the auditory canals.

These latter, however, I have, after practical experience, found it advisable

*Read before the Regular Meeting of the Buncombe County Medical Society, Jan. 18, 1897.

to replace by the ear pieces of a binaural as they are not liable to fall out of the ears at a critical moment as are those of Bianchi, speaking for my own ears certainly and for those of others judging by what has been written.

For ordinary use the convex vulcanite plate is firmly but lightly pressed on the part to be examined, and the ear pieces being inserted, auscultation is proceeded with as with a binaural, the difference being that a Phonendoscope gives both a louder and clearer sound than that obtained by direct auscultation or by a stethoscope.

When the sound is too loud as is sometimes the case it can be modified by closing one tube, or by attaching a special rod and plate, later to be described, and one or the other of these methods is frequently desirable, as with loud or distinct sounds the magnifying power of the instrument can detract from their purity.

When we desire to auscultate some portion of the body to which from emaciation or other reason it is impossible to properly adapt the rather larger chest piece, we attach over the surface of the convex plate, by means of a bayonet catch, a thin flat plate of vulcanite, into the centre of whose outer surface screws a metal rod tipped at its free end by a hard rubber button. The inner surface of this flat plate, at its centre, is tangent with the convexity of the resonating plate and thus, when the button is placed on the spot to be auscultated, the sounds, transmitted through it to the metal rod, are directly given to the convex plate and thence to the ear, the principle being the same as that exemplified by the experiment of our boyhood's days when, with one ear to the end of some log, we listened to our companion's pin scratch at the other end and heard it more clearly than we should have been able to do had we been standing by him.

The chief use of this rod, however, is in auscultatory percussion, whose execution I will speak of later on.

So much then for the instrument's mode of action, and now as to its uses.

I have used it extensively for the past two months or more on a variety of cases and for the various purposes for which it is applicable, and while not ready like the proverbial testimonial writers so well known through our patent medicine advertisements, to say that "if I could not get another I would not take a hundred dollars for it," I yet believe that in it we have an instrument which, especially here in Asheville where accurate diagnosis is so important, will be of real value in a number of cases and in certain cases will give us information not to be gotten to so full an extent in any other way.

Its first use is to render more audible faint or doubtful cardiac, pulmonary or other sounds, where our ear or the ordinary binaural fails to allow satisfactory study and analysis of what we hear; that is, not to supplant, but to supplement, those time honored methods.

Moreover, through its marvellous ability to collect and transmit sound, it will be of use in those cases where, owing to the false modesty of our patients, we are obliged to auscultate through the clothing. However though with the instrument this can be done, and heart murmurs or pathological pulmonary sounds recognized through surprisingly thick layers of clothing, I trust it will never tempt us to resort to that lazy and inaccurate method of examination, a method which cannot be too strongly discouraged, and this is the less likely, as, with the daily increasing spread of information and intelligence on medical matters among the general public, the occasions where it is demanded by the patient should be rarer and rarer, and surely, unless so demanded, no modern practitioner who pretends to be accurate in his diagnostic work, would desire it.

To return to its use as an amplifier of faint sounds, I have found that sometimes faint crepitations, indistinct bronchial breathing, or more especially doubtful heart murmurs, are with this instrument, more easily heard, more thoroughly studied and more certainly diagnosed. However, while recognizing its real value for this purpose I would be sorry to see its power in this direction tempt us to give up the direct use of the ear on the bare chest wall, which, I believe, should always, when possible, be practiced as a preliminary to a Stethoscopic or Phonendoscopic examination, and whose abandonment would be a decided retrograde step in our advance in diagnostic methods. He who exclusively uses the Stethoscope or more yet the Phonendoscope, in his work, will, in becoming accustomed to their somewhat exaggerated reproductions

of the natural sounds, be obliged to lose something of his appreciation of their true quality and nature, not unlike the boiler maker, who, from working amidst deafening noises becomes unable to hear unless amidst the din of the factory.

I have found especial value in its use with the rod attached, to auscultate in the supra-clavicular or inter-costal spaces when, as is so frequently the case in pulmonary patients, these are unduly hollowed out. This great hollowing is very frequently a drawback to the full study of existant conditions, and by the use of the rod which, reaching down into the depression, brings us the sounds direct and without difficulty, I have gotten information which, I believe, I could not have otherwise obtained.

Again, I have found that even in ordinary and not emaciated subjects we will get, by the use of the rod, purer and more normal sounds than with the convex plate, and hence I not infrequently have employed it in preference to the other.

Its other, and possibly its most important, use is in Auscultatory Percussion, a method which hitherto, owing to the difficulty of practicing it with the usual binaural stethoscope, has been too little used.

With the Phonendoscope we can practice it without any assistant and with ease, and by its use are able to map out organs with a truly remarkable accuracy, getting results which I believe to be superior to any we could hitherto hope for. When we desire so to use it we attach the plate and rod, and placing the button over the site of the organ, make light even strokes of our finger over the skin, beginning near the button and gradually going further and further away.

Change of tone and sudden loss of sound give us clear indication of change in the underlying structure and enables us easily to find its border which we mark with an analine pencil. Returning to the button we start in a new direction and soon a row of doto shows, with great exactness, the shape of the part. Painstaking and careful percussion will in every case verify the accuracy of the results so obtained, and I doubt not that post mortems would show that its indications are perfectly reliable. In this way the liver, spleen, heart, kidneys, full bladder and other organs, as well as solidified portions of lung tissue, and other such conditions, can be mapped out, though I have not so far been able to verify Bianchi's statement that the borders between the lobes of the healthy lung, or the divisions of the cavities of the heart can be found, though, with more practice, we may be able to accomplish even this.

Bianchi has indicated on a plate published with his original article, and reproduced in a recent number of the Medical Record, the points he chooses in examining the different organs in this way, but any doctor used to physical diagnosis can construct such a plate, without difficulty, for himself.

This method of auscultatory percussion has seemed to me of especial value in two or three conditions, namely, to map out the exact area of hypertrophied, dilated, or displaced hearts, not always an easy proceeding by ordinary percussion, to study incipient apical consolidations in phthisis, and to study the location and extent of areas of lobular pneumonia.

However, there are many other cases in which it will be of value, and the experience of the individual practitioner will best indicate its scope.

Before closing I would refer to a use of the instrument which I have not as yet had an opportunity to verify, but which seems to me should be of great value, namely, to hunt for faint crepitations in suspected fractures. In plain cases with crepitation audible even at a distance it is superfluous, but we have all seen instances where we wished our ears were more acute that they might help us in deciding that important question, "is this bone broken or not?"

In conclusion I can only advise my hearers after purchasing a well made Phonendoscope, for I am told there are many poor ones on the market, to try for themselves this new implement of their art; in no other way can the profession win a final and satisfactory opinion as to its value; but let the trial be long and patient and do not on the one hand throw it aside after a short and insufficient test as a useless medical toy, or on the other indulge in premature praise, based on inadequate knowledge, until practice has given you such skill in its use as to enable you to form a just estimate.

If so used I believe it will be found as I have already said, not to supplant it is true, but to excellently supplement the

methods already at our disposal and to be not a passing fancy, but a real and permanent addition to our resources in our fight against disease and death.

65 French Broad Ave.

A Surgical Surprise.

By H. A. Royster, A. B., M. D., Raleigh, N.C.

In looking over some notes of the surgical cases seen during my first year of practice just passed, I selected the one herewith reported as being very unusual and, therefore, worthy of record in this brief article. Thousands of appendices have been removed, but few, I think, from such an abnormal position and under such peculiar circumstances as in the following case.

J. P., a colored man, sixty-four years of age, first consulted me in the latter part of January, 1896. The history that he narrated was characteristically vague, but, with some modifications and subsequent revision, the following was finally elicited:

He was born of vigorous parents and was healthy all his life until about ten years ago, when he fell from a building on which he was at work as a carpenter. No apparent injury resulted from this fall, but he thinks he was "hurt internally," and attributes much of his present condition to it. Three months afterwards he noticed in his right groin a small lump which remained until the time when he came under observation, though it had disappeared at intervals. Six or seven years ago he began to have "bladder trouble"—frequent micturition, dribbling of urine, and difficulty in expelling the last few drops. In the autumn of 1895, he had an attack of dysentery, suffering intensely for several weeks with tormina and tenesmus. Simultaneously with this attack he found that the swelling in his groin was larger and that it seemed to produce a dragging sensation within his abdomen. This was especially severe in his right iliac and inguinal regions. The dysentery has continued, with more or less severity, up to the present time. The tumor has, as before, disappeared at times, to return in a few days, but it has been gradually growing. He says that when he lies down it is somewhat reduced in size, and that it is very much smaller when he awakes each morning.

Upon examination I found in his right inguinal region, immediately under the middle of Poupart's ligament, a tumor about the size of a walnut, soft, indistinctly fluctuating and movable. Three conditions naturally presented themselves, viz.: a femoral hernia, enlarged gland, lipoma. My first thought, on looking at it, was femoral hernia; but on closer examination I discovered that it was attached to a pedicle, which seemed to arise either from within the abdominal cavity or from Poupart's ligament itself, and that it had no relation whatever with the saphenous opening. Moreover, though the tumor was somewhat smaller with the patient in a horizontal position, it was really irreducible and there was no impulse on coughing. The appearance of the swelling was also strongly suggestive of an enlarged lymphatic gland, but it did not feel like one, and its attachments were not those of a gland. Palpation of the mass gave one at first rather the idea of a fatty tumor, and, yet, during the manipulations, it was seen to alternately collapse and refill, as if its contents were air. Finally, the possibility of its being the appendix vermiformis, or some other intestinal diverticulum in an unnatural situation, was thought of. There was no certainty of an absolute diagnosis. At each examination during the days he was under observation I am sure I held a different opinion as to the nature of this swelling. An exploratory incision was advised.

For the succeeding two months I was confined to the house by illness and did not see the man again till the latter part of April. His condition then was practically the same as before, except, perhaps, that he was thinner and weaker. He consented readily to the exploratory operation and it was performed on April 30, 1896, at 4 P. M. The preparation of the patient was careful and the details of technique carried out with strict precautions, keeping in view the possibility of having to deal with a hernia. Under ether anæsthesia, an incision was made parallel with the ligament longitudinally over the tumor. After dividing the skin and the successive layers, a sac of peritoneum was reached, and in this was contained the tumor which had become much shrunken from the handling. It was un-

doubtedly bowel and yet, clearly, a diverticulum, for there was no loop and no sign of strangulation. On opening the sac and following up the pedicle, the latter was seen to emerge from the lower border of Poupart's ligament and to extend into the abdomen as far as the finger could reach, being at that point about the diameter of a goose quill. It was not possible to gain its attachment above. Moderate traction failed to move it from its fixed position and it was deemed inadvisable to prolong the incision into the abdomen. A strong silk ligature was placed around the pedicle as high up as possible, the distal portion cut off and the upper end allowed to retract within the abdominal cavity. The external wound was closed with one row of silk worm gut sutures and dressed in the usual manner.

Examination of the part removed after the operation showed it to be a tube, half an inch long, having a diameter of one quarter of an inch and ending in a blind pouch which was about one half an inch across its widest portion. The extremity was thickened and indurated. Its resemblance to a chronically inflamed appendix was perfect, and such it was considered to be. The whole mass was sent to a pathologist for microscopical examination, but, unfortunately, never reached its destination. The final result of the case will prove how far the macroscopic appearance was to be relied upon.

The patient rallied from the operation nicely, and during his immediate convalescence never had an untoward symptom —unless it was the too frequent dysenteric discharges. His temperature the first night rose to 100° F., but descended gradually in two days to the normal and never went above this except on the eighth day when it touched 99⅕° F. once. From the very first day after the operation, he slept well, ate with relish the diet that was ordered for him, and, though he suffered some pain in his left side, over the sigmoid flexure, he was entirely free from that dragging sensation in the right side of which he had complained for a long time. But the condition of his bowels never improved. Beginning on the second day the number of movements varied from three to six each twenty-four hours the discharges consisting chiefly of mucus, at times tinged with blood. No abatement of this condition was produced by the administration of medicine and careful dieting. On the seventh day he was sitting up in a chair; he felt comfortable, his urination was less difficult and less painful than for five years before. In a week more he was walking around the house fairly well, but before another fortnight was gone he began to lose flesh and strength rapidly, and finally died on June 22, 1896, just seven weeks after the operation.

Autopsy: Done for me by Dr. H. C. Upchurch on June 23, 1896. Abdomen was opened by a median incision and region of operation explored. The silk ligature was found clean and dry, adhering to the peritoneum just where the pedicle was tied off. The cæcum was situated low down, but no appendix was to be seen. At its normal site on the colon was a smooth, glistening spot, surrounded by a few adhesions. The mucous membrane of the whole lower bowel from cæcum to rectum presented a condition of extensive ulceration, especially in the sigmoid, where the ulcers were gangrenous and unusually large. The mesenteric glands were also greatly swollen. Scar of incision in right groin was hardly visible.

Remarks.—This case was an odd one in several respects. In the first place, it furnished a diagnostic dilemma which was most puzzling. There was no chance, I believe, of deciding positively the character of the swelling before operation. The result of the *post mortem* proved that it was undoubtedly the appendix vermiformis which constituted the tumor, and which was removed at the operation. This rudimentary structure, it is well known, is found at times as the contents of ordinary herniæ. What caused it to assume this abnormal position, it is difficult to say; possibly, it may have been produced by the fall sustained ten years before, though it is contrary to my usual rule to accept personal history as being definite in any particular. Another factor was the chronic dysentery, from which apparently his death resulted. Here, again, we cannot rely upon the patient's statement from its very vagueness. The finding at the autopsy showed the existence of dysentery of a type severe enough to kill, while there was no other cause of death demonstrable. It might be worth while to consider whether the misplaced appendix bore any pathologic relation to

the chronic dysentery, or whether the surgical interference hastened the fatal issue of that disease.

Altogether the case affords an illustration of one of those many surprises with which even general practitioners occasionally meet in their surgical work. Curiously enough, a few days after I had performed the operation detailed above, I came across a case very similar to it, reported in a paper on "Medical Surgery," by Dr. G. E. Benninghoff, of Bradford, Pa., and it is the only other case of the kind that I have seen in medical literature. His patient was a woman who had an enlargement in her right femoral canal. It was oblong in shape, painful and reducible on lying down. There were increasing periods of pain, and at the last one the doctor was called to find the suffering more intense, the patient having symptoms of strangulation. He had previously diagnosticated femoral hernia and, at the time, being unable to reduce it, he operated to relieve the strangulation. He was surprised after bringing the mass into view to find that it was the appendix vermiformis. This was removed and the patient recovered.

Dr. Benninghoff says: "Even after removal it was so enlarged and changed by inflammation and its results that I was uncertain as to what it was; but three years later the lady developed a subserous uterine fibroid, for which I did an abdominal section, and while doing it I had a good opportunity to search for the site of the appendix, finding where it had been removed at the former operation."

His was a more fortunate, if not a more certain, method than mine of demonstrating the removal of the appendix.

323 West Morgan Street.

The Surgical Treatment of Posterior Uterine Displacements.

By I. S. Stone, M. D., Washington, D. C.

After many years of experience in the treatment of uterine displacements, we still find quite a number of cases incurable by mechanical treatment, or that by some sort of support intended to hold the uterus in the normal position. Pessaries are not so frequently used as in the earlier days of gynecology. Two causes contribute to this result. The treatment of displacements by vaginal supports often fails, or at best only gives temporary relief, while surgical results are becoming constantly better, and afford almost absolutely perfect results. The question may well be considered by those who believe that perfect results may be almost uniformly obtained by surgical means, whether it is good advice to urge a continuance of local treatment, including pessary wearing, when the patient is not relieved after a fair trial of these expedients.

Generally speaking, a dislocated uterus gives rise to symptoms. There are some exceptions, however, to this rule. Some women appear to have no symptoms or pain, with a retroflexed and very adherent uterus. Others may have a severe case of prolapse of the uterus, with no distress or pain, but are merely inconvenienced. We return to the statement that women generally do suffer from dislocation of the uterus. They may not have local pain or any of the pressure symptoms, but may instead have reflex and often very distressing symptoms, which are only relieved by the restoration of the uterus to its normal position. Thus we see neuralgias, headaches, gastricalgia, nausea and vomiting, due to the cause above mentioned. We have seen the most distressing pruritus ani of ten years standing promptly relieved by the restoration of a retroverted uterus. We have seen recently quite a number of patients with rectal pain, who have undergone numerous operations for fissures, hemorrhoids, ulcers, etc., due to an undiscovered retroversion, with adhesions to the rectum. These cases are opposed to any further surgery with good reasons, but it is always best to correct such a displacement at any cost, even if the abdomen must be opened to accomplish that end.

The writer believes that cases of retrodisplaced uteri are seldom or never cured by a sesort to pessaries, if the cases are of long standing. Some acute cases, as for instance those we occasionally see after an accident, may be restored by timely treatment, but those coming to our notice with over-stretched ligaments, and especially those having adhesions to viscera, are rarely, if ever, permanently cured so that the patient can lay aside her pessary.

A pessary is a make-shift, a crutch, a temporary expedient, the lesser of two evils. It means a distended vagina, a substitution of one form of pressure for another, and not the least of its evil effects is its office of filth collector. It is impossible to use any kind of pessary without occasionally removing it in order to cleanse it, and thus every woman wearing one is a regular visitor at her physician's office. She is obliged to submit to repeated examinations, and almost endless annoyance and inspection while she wears a pessary, yet in spite of the many disadvantages, we must needs use them occasionally.

It is not my purpose to go into the causation of displacements, or the interesting methods of prevention which would include the surgery of the pelvic floor. Given them a patient who has a retrodisplaced uterus, who has either become tired of wearing a pessary, or who cannot be relieved by one, we may consider some form of surgical treatment. The writer thus omits purposely all other so-called methods of cure, such as electricity, massage, etc.

There are a certain number of cases of adherent uteri to be relieved by forcible apparation of adhesions under anæsthesia. (See Schultz.) As there is always a doubt as to the cause of infection, or at least there is a doubt as to the cause of the adhesions, one must carefully exclude infectious disease of the pelvic organs before attempting so radical a measure. The writer has frequently tried this method, and on more than one occasion immediately opened the abdomen and witnessed the result. The uterus can be liberated from adhesions which envelop its entire anterior, superior, and posterior abdominal surfaces. The broad ligaments may be unfolded, which will often liberate imprisoned tubes and ovaries. If great force is used, the bowel may be torn, and the writer always fears this accident, and can not recommend the procedure for general adoption. One must be prepared to open the abdomen who uses great force. When such adhesions are broken up by force, we may be obliged to repeat the operation, as reunion may occur.

Various operations have been tried looking toward a relief of these displacements, with varied success. As is well known to all, these operations must either influence the body of the uterus or the ligaments which furnish its support. Thus we have Alexander's operation upon the round ligaments generally without opening the peritoneal cavity. Polk and numerous others shorten the same ligaments within the abdomen, through either a vaginal or abdominal incision. The utero sacral ligaments come in for their share of attention also, and we find surgeons shortening them through an incision in the cul de sac of Douglas. The ligaments last mentioned must be elongated when the cervix comes downwards and forwards, and if they are made short it is claimed that the fundus uteri can not get backward into the hollow of the sacrum.*

In the method known as vaginal fixations the abdomen is reached through an opening between the bladder and the uterus. The vagina itself is sutured to the uterus at a point on its anterior surface, high enough to hold the fundus forwards. This must be above the flexure, if in a case of retroflexion, and in a large heavy retroverted uterus, it would necessarily be well up about the junction of the middle and upper third of the anterior surface. The operation was probably a step in advance when originated by Martin and his pupils, but it is deservedly falling into oblivion, as there are but few, if any, indications met by it, which are not satisfactorily obtained by other methods, moreover it fails to elevate the uterus. It is now possible to obtain sufficient support for the uterus without real fixation. Or it is better to say that the retroverted uterus can now be restored to its natural position, with motion in all directions except downwards and backwards.

The method about to be described has been developed and perfected by Dr. H. A. Kelly, and while the writer differs in his technique from that of this versatile and otherwise gifted surgeon, he acknowledges his indebtedness to him for the principles involved in the operation.

The suspension of the uterus by Dr. Kelly's method is secured by passing two or three sutures first through the preitoneum and sub-peritoneal structures, on

*Keith clamps the broad ligament. Lancet 1894, Vol. 2, P. 679.

one side of the incision, avoiding the firm fascia of the transversalis muscle, and then through the wall of the uterus posterior to the fundus, and out on the opposite side in a similar manner. The result of the operation is at first to attack the uterus closely to the peritoneum, and abdominal parities; but almost immediately the peritoneum yields to the weight of the uterus and extra abdominal pressure, and a suspensery band of peritoneum from the parieties, and fibrous tissue and peritoneum from the uterus, forms a fibro-serous or artificial suspensory liga ment of the uterus, which varies to two or more inches in length. We agree with those who recommend the formation of this ligament at a point anterior to the fundus in all cases where pregnancy is a probability. The attachment posterior to the fundus crowds the fundus forwards upon the bladder, and limits the expansion of the anterior wall in pregnancy.

Objections have been raised to this operation by Dr. Emmet and others, that it raises the uterus too high, that it is still out of place. In answer to this we can at least show that in any case we obtain results far better than from any other treatment. A very large uterus which is congested, and so heavy as to suggest fibroid degeneration, will rapidly undergo reduction in size. Dr. Emmet says he knows that the round ligaments when shortened depress the cervix (and uterus also) because he on one occasion, while Dr. Alexander was operating, could feel, with a finger in the vagina, the uterus descend in the pelvis. However this may be with Alexander's operation, or vagina fixation, it does not constitute an objection in the operation under discussion. Other surgeons offer objections which are directed against fixation rather than suspension- All of the cases of dystocia reported have been in fixation operations. It has been urged by some that abortions frequently occur as a result of ventro suspension or fixation. It seems quite unnecessary to mention this, and still less to reply to it, for the obvious reason that many of these women are sterile with the uterus in the former position, and taking it for granted that the accusation is merited, we know that very many more children will be born safely at term with the operation than without it. One writer suggests that a case of hyper-emesis gravidorum resulted from a ventro-fixation. The case must be exceptional and until others are reported we see no reason to be influenced from our favorable opinion. (See Journal p. 544.)

A description of the Alexander operation will not be made, and we merely refer to the fact that there is a place for the operaiton, and I think an important one. In women who have nteri in posterior displacement, but which can be replaced with difficulty, yet which have no adhesions which can be discovered, and especially if they demand some relief outside of pessary treatment, this operation may be tried. There are certain unknown quantities involved in the operation, however, which we should carefully consider before a decision is reached. No surgeon can say before the operation is begun that he will either find the round ligaments strong enough to hold the uterus, or that if they appear strong enough that the uterus may not gradually settle back in its old place. Again a certain proportion of hernia have resulted, even when there is no wound infection. The writer finds in a majority of cases of retrodisplacement about which he is consulted, that some peritoneal inflammation has long existed. These cases generally require that the abdomen be opened to break up adhesions, which in no other way can so safely be separated. When the patient requires an anæsthetic to do this, she generally consents to whatever is necessary to accomplish the cure, which has previously been impossible. The abdomen once open, the necessary surgery done, it is folly to let the uterus drop back amid raw surfaces, which must reunite and almost surely bring a return of the former symptoms. Therefore it has become the rule for some, myself among the number, not to trust any but the best and surest means of preventing the return of the displacement, by the operation known as ventro-suspension of the uterus. We do not always remove adherent ovaries and tubes as some may suppose, but the tendency now is strongly in favor of liberating prolapsed and adherent Fallopian tubes and ovaries, and securing them in a better and safer position. In many cases, indeed in nearly all cases, where

the writer removes the adnexa of both sides for purulent salpingitis and ovaritis, he sutures the uterus to the abdominal wall, whether it was formerly retrodisplaced or not. It is usually ready to drop down in the pelvis and become adherent to everything with which it comes in contact.

The writer has had no case of obstruction of the bowels, or even any suggestion of such a result, after any operation of this kind, and is convinced that the former method of treating the uterus was responsible for much of the trouble in obtaining free catharsis after laparotomy.

Some women with these displacements may have melancholia, and we may be led to believe that some surgical operation may cure their mental condition as well as their physical suffering. It is not best to invariably deny these poor women the benefit of surgery, but it is important to exhaust every other resource first, and the best counsel should be obtained before resorting to a procedure which might involve the operator in some form of legal tangle, or at least subject him to great annoyance and adverse criticism.

Of the value of hysterorrhophy or ventro-fixation, or suspension, we can not furnish satisfactory statistical information. Nearly all operators have testified to the very great value of some one of those procedures. Time enough has elapsed to show that in a vast majority of instances the patients are permanently relieved. (Read Noble p. 550.)*

Quite a number of reporters mention cases of difficult labor after fixation of the uterus; transverse positions, breech presentations and dystocia due to a retraction of the posterior uterine wall and elevation of the cervix. As mentioned previously Dr. Noble of Philadelphia, has done one Porro Operation in such a case. Therefore we agree with those who altogether avoid any real fixation of the uterus.

Olshausen says, z. f. Geb. Med. Gyn. XXXII. Treatment by pessaries cannot be avoided, but is falling into the background. He does not believe in massage. Experience satisfactory so far with ventro fixation.

Czempin operates without opening the peritoneum.

Fraipont Am. de la Soc. Med. Chi. de Liep., 1894, reports several cases delivered safely after hysterorrhophy. He thinks the uterine adhesions separate during pregnancy, but that the uterus remains in position after delivery.

So far as the personal experience of the writer goes he has had reports of three normal deliveries after ventro-fixation. Two of these were reported by Dr. Noble in his paper before the American Gynecological Society, May, 1896. Since that one other has been added to the list. Dr. Fry of this City, has also had one normal case. Dr. Kelly† has had twelve in which pregnancy occurred with seven labors (normal), one miscarriage after violent exercise (dancing), and the remaining four went to fourth or fifth month.

Many foreign operators add their testimony to that of Dr. Kelly and others of this country, in favor of ventro-fixation or suspension, but the purpose of this paper is not to make up a compilation of statistics, but merely to add my own testimony to that of other operators who are striving after perfect results in the relief of a very prevalent form of pelvic disease.

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*The American and Gynecological Obstetrica- Journal.

†Personal communication,

Progress of Medicine in Denmark.

By Kate C. Mead, M. D., Middletown, Conn.

The progress of medical science in Denmark is as rapid as it is in Germany or France. Although Denmark is a poor country, financially, and though she has lost much of her ancient greatness through the envious hostility of her neighbors, she is as alive today as she was when her sailors roamed the ocean in viking ships on voyages of discovery, and made themselves so much at home in England that England became for a time a colony of Denmark, ruled by Danish kings, only a short thousand years ago.

One can not travel in Denmark today, meeting Danish men and women, without feeling their kinship and their "Yankee"

insight and shrewdness. The Danes look and act like Americans, and hence we should expect to find among them institutions, and hospitals, medical schools and scientific appliances, that are in every way abreast, and in many cases ahead, of the times, owing to their concentration in a country of so small area.

We find in Copenhagen alone twelve large public hospitals, besides numerous private hospitals and sanitariums and individual clinics. These hospitals seem to be well filled, the clinics are unusually interesting, and the treatment of the patients is scientific and thoroughly modern.

Copenhagen has a population of nearly 400,000, if we include its suburbs. It is essentially a modern city, for there is scarcely a building in the city 200 years old, and very few of importance that date back even 100 years, on account of the fearful fires and destructive wars that have ravaged the city more than once. Most of its hospital buildings have been erected since the last war, 1863–'64, with the exception of the General hospital, and the Garrison and Frederiks hospitals, which date back to the latter part of the last century, and the Kommune hospital which was begun after the war of '57.

In matters of hygiene Denmark is behind America. This is but natural in a country so old and so full of traditions of manners and customs, and of styles of buildings The houses in the city are mostly flats, solidly built of brick or stone around a court, and so arranged that in the older houses where bath rooms and waterclosets are unknown, no well ventilated place for the offensive earth closet can be found on each floor. In the newest houses which rent for as much money as houses of the same class in our American cities of 50,000 inhabitants, the hygienic arrangements are modern, and one often finds in them Albany toilet paper and American flush-closets.

The Copenhagen water supply comes from a large reservoir just outside the old fortifications of the city.

Denmark has long suffered from the ravages of tuberculosis. Its death rate from that disease alone has been higher than in most other countries, and its hospitals are full of tuberculosis in all its forms. The cause of this is found in the unhealthy food of the peasants. They eat very little if any fresh meat, margarine instead of butter, and often fat pork instead of margarine, and they drink boiled chickory coffee from three to ten times a day.

A strenuous effort is now being made to improve the diet and homes of the country people. I have been told in regard to bovine tuberculosis that if one cow in a herd is found to be tuberculous the whole herd is killed by the order and at the expense of the government. The meat for market is carefully inspected and stamped, and heavy fines with imprisonment are imposed on any man found selling unstamped meat.

The hospitals and dispensaries in Copenhagen are well patronized, not only by the really poor people, but by a very well to do class of working people, who ought to afford the small medical fee charged by young Danish practitioners —one krone, 28 cents, being the ordinary fee. Frequent attempts to control this misuse have raised storms of opposition from the supporters of the dispensaries, who, from a false sense of pity, say that the patients should be the judges of their pocket books.

The Kommune hospital consists of a main building for administration, offices and small clinics, with numerous buildings within its enclosure for wards, laboratories, &c. The walls are solidly built of yellow brick, and though not what an up to date hospital should be in the way of a sanitary model, the buildings are much better than those of the old hospitals of France and Germany.

Copenhagen has a hospital for epidemic diseases, a large lying in hospital, eye and ear and skin hospitals, a childrens' hospital, besides the Frederiks hospital, connected with the University, a Deaconnesses and a red cross hospital, etc. Professors and docents at the medical school of the University are the physicians and surgeons at these hospitals, so that the medical students have unusual clinical advantages.

The medical faculty of the University consists of twenty-three professors and lecturers, and eighteen teachers who also lecture and give demonstrations in their respective departments. The medical course requires seven or eight years before the degree of M. D. can be obtained. A license to practice may be obtained

two years earlier, and many students are satisfied with this and never write their doctors' thesis in order to obtain the degree after the two years of practice.

To obtain a professorship in the faculty is a difficult matter. The youngest man ever chosen to this honor is Prof. Knud Faber, who, when he was 33 years old, was appointed one of the contestants for a vacant chair as Professor of General Medicine. His opponents were all men many years his senior, who had been waiting their turn for a long time. The position was granted after most severe examinations, which lasted one week. During this week the contestants were each obliged to write a long thesis, which required elaborate research, to read this thesis before the judges, and to answer as many questions as could be thought of by these men, all of them professors of long standing, who not impossibly had individual favorites among the contestants. During this same week the applicants were obliged to hold almost impromptu clinics and to deliver each day a leecture on heart, lung, stomach, or other diseases, and to examine a series of very difficult and obscure cases from which to make a diagnosis satisfactory to the judges.

The University Semesters are from September 1st to the first week in June, with intermediate vacations.

Among the newest hospitals of Copenhagen special attention may be called to three. Of these, one is the Queen Louises' Childrens' hospital which has a new clinic building; the second is the new Red Cross hospital, and the third is Prof. Howitz's Maternity hospital, which was opened last summer.

The Childrens' hospital building proper is ten years old, and lacks modern hospital improvements to such an extent that the managers are hoping to build again in a few years, or else to re-model their present quarters. The rooms are heated by stoves, ventilated from windows and doors, have neither rounded corners, nor a special surgical pavilion, but owing to the strenuous efforts of the manager and head nurse of the hospital, Miss Rosen, the air of the rooms is always fresh, and the baby smell quite inoffensive. There are 70 beds in the hospital, always occupied. On the verandas and balconies, and in the gardens, many of the children in bed or dressed spend most of the time. The food for the "bottle babies" is given them in bottles of different color, according to the kind of food ordered, and each bottle is tied to a towel and the towel so arranged that the baby neither gets wet nor loses its bottle—a device as clever as it is prodigal of towels, 1400 towels a day being an average laundry list.

The physician in chief of this hospital is Prof. Hirschsprung, who is widely known through Germany, Denmark, Norway and Sweden, as is the surgeon in chief, Dr. Thorkild Rovsing. The surgery is mostly orthopedic, and the results are as good as the most accurate surgery combined with careful antisepsis can make them. The antiseptic precautions at Dr. Rovsing's three hospitals, and at Prof. Howitz's new operating room, are carried out in much the same way as is described by Dr. Bacon in the November number of the Yale Medical Journal,* with minor differences. Dr. Rovsing uses no dusting powder of any kind. If ever iodoform is used it is to cover a worse smell, and never in a healthy wound. Sterilized water alone is used for irrigation. Pads of absorbent cotton, covered with gauze, are used for sponging. These pads have been thoroughly sterilized in sealed paper cones, and are carefully counted before the wound is closed, then, of course, they are destroyed. Collodion and a bit of gauze is often used to seal a wound, and the redressing is not done until the wound is healed, if the case is healthy and normal.

Before turning to Dr. Rovsing's work at the Red Cross hospital, a short description of the Children's Clinic must be given. The building is new, built of brick and warmed by pipes. The waiting rooms are so divided that cases suspicious of infection may be separated from non-suspicious cases, and thus need not contaminate others. From sixty to ninety babies are treated at this clinic every morning. Each child is completely undressed and weighed, has its temperature taken, and is then brought before the clinician for diagnosis. If the case seems to be one of cholera infantum, the character of the stools is readily seen by placing the little finger in the baby's

*Leonard Woolsey Bacon, Jr., M. D. The Theory and Practice of Surgical Dressing. Yale Medical Journal, Nov., 1876.

rectum a few seconds, which causes a movement of the bowels. If necessary a rectal injection of water follows this. The stomach pump is then used for the sake of diagnosis and of lavage if this too is indicated. The mother is given printed directions as to diet for the child, and printed receipts for preparing barley gruel, blue-berry soup, &c., &c. Prof. Hirschsprung himself is at the clinic every morning to superintend any obscure cases, and every week he lectures on children's diseases. A careful history of the clinical cases has been kept for many years, and this of course is now very valuable.

The Red Cross hospital is a new private hospital, surrounded by a garden, in a quiet part of the city. The hospital is thoroughly modern, and the operating room is at the top of the house, lighted from the front and above. The instruments are prepared over a gas stove, as Dr. Bacon has described; the operating table is of painted iron, the shining walls of the whole room are scrupulously clean, and the hands and arms of the operator and his assistants are disinfected by scrubbing with potash soap, soaking in alcohol and then in bichloride. The patient is so carefully prepared that infection of the wound is almost impossible. Rubber drainage tubes are used where necessary. The cases operated on here are mostly cases of kidney or bladder disease, operations for which Dr. Rovsing has a well earned reputation throughout Scandinavia and Finland, so that patients are sent to the Red Cross hospital for his treatment from a very wide radius.

Prof. Howitz is known as a surgeon in Europe and America, famous for his hysterectomies and ovariotomies, and for having been one of the very first to adopt modern Listerian methods and to make abdominal sections.

He built his own operating room a few years ago in connection with the large Frederiksberg hospital. This room is thoroughly equipped with all modern appliances for the destruction or exemption of germs. The instruments are sterilized in the room, but the gowns, towels and dressings are brought to the room in the sterilizers after sterilization. Prof. Howitz has done 1100 laparotomies and he has not had one death in th ast four and a half years, a remarkable fact, which he attributes to the extreme cleanliness of his nurse in chief. He uses a Swedish operating table, which tilts in any direction; it is of iron painted white, and is not expensive. The white walls, the great windows over head and in front, the stone floor, the instrument case, the stands and dishes and the four marble wash bowls, &c., &c., can all be scrubbed as often as is necessary—hence the lack of mortality.

Near this hospital Prof. Howitz has this year built a small maternity hospital for the use of married women. It is of brick, three stories high, with one or two small additions, and cost, completely furnished 55,000 kr. (about $15,000).

A patient enters the wide hall, is met by the head nurse, whose office is near the door, and who takes the patient at once to the bath room, the first door to the left of the entrance, where she has a good hot bath and gets into clean hospital clothes. The bath room has open plumbing, an English porcelain tub, careful ventilation, and spotless tiled floor and walls. The patient after the bath is then taken up shining stone steps to the room which she has until she is confined. The rooms are all tiled, have rounding edges and curved corners, polished floors, iron bedsteads painted white, and folding cribs of painted iron. The heating of the whole house is by circulating hot water which passes through pipes in the walls, so that fresh air entering from without beneath the windows passes over the hot pipes and enters the room warmed. The women go out on to a large roof garden every day for exercise and sunbath. The water closets are perfectly arranged; the shutes for soiled clothes are conveniently placed; the diet kitchen is furnished with dainty dishes, and has gas stoves and hot water stands for keeping food warm. The meals are sent to the whole house from the large hospital near by, an economy as well as a satisfactory arrangement for those whose palates are cared for.

Of course the confinement room is as carefully planned as any other surgical room. The patient is confined on a table, then gently laid on a clean bed and taken to her new clean room.

In the confinement room is a case of obstetric instruments, a gas heater for sterilization, a large apparatus for steaming the gowns, towels, pads, &c., scales for weighing the baby, a few drugs, a

clock, a thermometer, beside the iron table, the bed, and the baby's canvass hammock.

There is a special wing for any infectious case. If a woman enters with a contagious disease she goes into the special bathroom to the right of the entrance, and from there, in hospital clothes, into a wing that does not communicate with the rest of the house and which has its own paraphernalia for the confinement, as well as a waiting room and convalescent ward.

There is a large attic where the clothes of the patients and their boxes may be kept. The cellar is as much of a "show place" as the rest of the house, and is as clean as any of the rooms.

The Superintendent of this Maternity hospital is the Countess Holstein, a trained nurse who wishes to give her entire services for the good of the cause; Prof. Howitz will not accept this, but insists on paying her the nominal sum of about $150.00 a year. The assistant nurses are paid about $6.00 a month, with their board and uniforms, and they are expected to remain indefinitely. Many of the nurses in the other hospitals of Copenhagen have been in the same wards for from ten to thirty years.

Copenhagen presents, therefore, very great advantages for medical study; its standard and its aims are as high as in any city of Europe, and its clinics and graduate courses are rich in material and are not overcrowded.

The Use of Formaldehyde as a Disinfectant,

By E. A. de Schweinitz, Ph.D., M. D., Professor Chemistry and Toxicology Medical Department, Columbian University, Washington, D. C.

In order that a disinfectant shall be thoroughly satisfactory there are a number of conditions which must be fulfilled. In the first place it should destroy surely and quickly the most resistant forms and spores of injurious bacteria. It must be a substance that can be easily used, non-toxic and non-destructive to mineral or vegetable matter in the concentration necessary to insure complete disinfection. Further it should be a substance which can be applied in a gaseous condition to secure thorough contact and penetration of the objects to be disinfected. Again, it must be a substance which is stable in character, not easily decomposed, cheap, and if possible, possesses an odor which dissipates quickly, and should be a good deodorizer. To a certain degree formaldehyde possesses all of these properties and its practical use has been the subject of a number of investigations. Commercially we find formaldehyde in the market as a 40 per cent. solution of the gas in water or alcohol under the trade names of formalin and formol. This gas can be prepared with great ease. Already in 1888 the strong antiseptic properties of Formaldehyde were recognized by Law, and in 1893 Trillat published the statement that a bouillon containing 1 part of formaldehyde to 50,000 was not suitable for the growth of the anthrax germ. Aronson after making similar experiments tried the poisonous properties of the gas upon guinea pigs and found that they could live for an hour in an atmosphere rich in formaldehyde gas. During this experiment the animals were very restless, but recovered very quickly in normal air. Zuntz had already shown that the poisonous dose for rabbits after a subcutaneous injection was about 0.24 grams per kilo.

In 1893 Formaldehyde was recommended for the disinfection of brushes and combs as well as for use to destroy the germs of diphtheria, tuberculosis, cholera and the like on such materials that would be injured by other disinfectants.

Another authority asserted in 1893 that after one hour in solution of a million and after ¼ hour in 1:750 anthraz and tetanus germs were destroyed. The results further showed that in the air 2.5 per cent. by volume of formalin or 1 per cent. by volume of formaldehyde gas was sufficient to destroy fresh virulent cultures of typhoid, cholera, anthrax, &c., in ¼ hour. Other experiments have shown that bandages and iodoform gauze can be kept well sterilized by placing in the jars containing these same formaliths, and it was also possible for Stahl to make carpets and cloth materials germ free by spraying them with 0.5 to 2 per cent. formalin solution for ¼ to ½ hour, without the color of the carpet being in any way affected. In 1894 the deodorizing

property of formaldehyde was explaiued to consist in a direct chemical combination of formalin with sulphuretted hydrogen and its products

With Scatol a disagreeable constituent of the faces formaldehyde combines upon the addition of acid to an odorless com pound.

Formalin further forms direct compounds with ammonia and ammonium bases which fact has been made use of to determine the quantity of aldehyde.

The researches of Pottevin in 1894 confirmed those of Aonson and Trillat, that a concentration of 1:20,000 was safely a retardent of sufficient strength.

As Walters has shown so far as the action of formaldehyde in gaseous form is concerned that is dependent upon the concentration of the gas the temperature and whether the articles to be disinfected are moist or dry. The killing of the germs is better accomplished when the objects are moist not wet and the temperature is 34°. A property which has long been well known for sulphur dioxide chlorine and bromine.

Of the practical methods of applying formaldehyde, those in which the gas is allowed to work in statu mascendi have given the best results. Several forms of lamps have been devised by which the formaldehyde is obtained by the imperfect combustion of methyl alcohol. Two simple ones have been described by Robinson and de Schweinitz. These have the advantage that the lamp can be filled with wood alcohol and placed in a room or the closed place which it is desired to disinfect. They have the disadvantage, however, that some of the alcohol undergoes complete combustion and a certain amount of carbon monoxide and dioxide are also obtained, and consequently a larger amount of alcohol is used than is necessary. Practical experiments made by Miguel, Bardet and others in disinfecting rooms by means of lamps have given very satisfactory results. The principle of the lamp is to allow the lamp flame to burn over a wire mantle of platinum or platinyed asbestos. Formaldehyde has also been recommended for the purpose of destroying the spores of smut by the action of 1:1,000,000 formalin solution.

In all experiments attention must be paid to the fact whether reference is made to the formalin 40 per cent. solution or to formaldehyde gas.

Walter has made extensive series of experiments with formalin and also with formaldehyde gas. His experiments were made first by preparing different kinds of culture media to which formalin had been added in different proportions. The results of these experiments upon anthrax spores, choler typhus and diphtheria germs showed that the proportion of 1:10,000 to 1:20,000 formalin, 1:25,000 of formaldehyde gas, is sufficient to check the growth of germs. When the gas is used the staphyllococcus pyogenes aureus seems to be the most resistant while strange as it may appear the spores of anthrax so difficult to kill by most germicides are very easily destroyed by the formalin. This is one of the principles of disinfection, laid down by Koch that some substances would be found which were destructive to pathogenic bacteria but were less injurious to ordinary germs. In order to prove the value of formalin on the large scale for the disinfection of clothing. Walter used a soldier's blue mixed with red color, immersed it in a culture of the pus germ so that the cloth was thoroughly saturated. Strips were then cut off placed under a bell jar and sprayed with formalin solution varying in strength from 3 per cent. to 10 per cent. The strips were left in the bell jar for six hours. After that time tests were made by cultures from these strips, check strips being used at the same time. There was no change produced in the color of the cloth and the red was, if anything, a little brighter. The germs which had penetrated deeply into the cloth were all killed just as well as those upon the surface, which can be explained by the fact probably that the articles being surrounded with the jar the gas was forced deeply into the interstices of the cloth and killed those germs which could not be reached by the solution. The 3 per cent. solution gave just as satisfactory results as the stronger solutions.

The preliminary experiments that Walters made with the gas to prove the availability of formaldehyde for the disinfection of clothing, &c., without injury to the latter were satisfactory except with reference to the length of time required. This, however, was due to the practical details of the method as the source of the

formaldehyde was either the powder placed under a bell jar or a lamp used in a room which was poorly adapted to the purpose as there were too many openings for the escape of the gas. The results of all of the investigations led to the following conclusions.

1. Formalin in concentration 1:10,000 makes the growth of anthrax, cholera, typhus, staphylococcus and diphtheria impossible.

2. In gaseous form a very great dilution is sufficient to check growth.

3. A one per cent. solution will kill pathogenic organisms in an hour.

4. With a 3 per cent. solution and the final addition of alcohol it is possible to make the hands germ free. Whether the hands are attacked by this method remain to be proven.

5. By spraying with formalin solution and subsequent enclosure of the articles in a closed space they can be made easily sterile.

6. Uniforms, &c., on a large scale can be disinfected without injury, in 24 hours.

7. Foeces are deoderized by a 1 per cent. solution and are in 13 minutes germ free.

Formaldehyde is a useful etching and preservative material.

As compared with other disinfectants as sublimate acid carbolic, lysol, and the like formalin has the advantage of being not interferred with by albuminoid matter, does not injure the articles used. Its adoption, therefore, seems to be well recommended and to fill many requirements which are not now satisfied by existing disinfectants. Especially is this the case in disinfecting rooms, bedding clothing, and the like. Experiments of Robinson and others have demonstrated its use in this connection.

Experiments made by Roux, Trillat and others upon the use of formaldehyde vapor for disinfecting rooms carried on at Montpellier have been very satisfactory, in that the bacilli of anthrax, tuberculosis and diphtheria have been killed within five hours by a saturated atmosphere of formaldehyde. After two days of thorough ventilation no odor remained in the room, nor were the objects which had been exposed to the action of the gas in any way injured. An objection to the use of formaldehyde has been raised because it adheres to clothing and upholstered material so firmly, but this can be removed by a careful ventilation or by the use of a dilute solution of ammonia which readily absorbs the gas and placed in a room where this had been used as a disinfectant would aid in a more rapid dissipation of the odor and not injure the materials. It would seem that in formalin and formaldehyde we have at hand the most useful disinfectant yet known, the application of which is a mere detail to be easily worked out in practice.

It also appears to be useful as a means of preserving foods, milk, &c., 1:10,000 but the effect upon the digestive ferments taken internally has not been thoroughly studied though the quantity necessary to protect against bacterial growth should be too minute to produce bad results, and none have been noted though formalin has been extensively used for preserving milk.

One litre of pure wood alcohol burned to formaldehyde gas, if there is no loss by futher combustion should give 361 litres of the formaldehyds gas.

Suggestions, or New Methods of Treating Non-Operative Cancer (Epithelioma) of the Cervix Uteri.

By S. H. Linn, M. D., University of Pennsylvania, etc., etc.

Many have tried to classify or arrange in series the operatable cases of cancer of the uterus, and the non-operative, few consider the unnecessary surgery, or the cases that might be cured by applied theraputics.

In studying the literature of the subject up to the present time, I find that cases which cannot be reached, with a hope of cure, by vaginal hysterectomy, are doomed to the prognosis—death. Many patients so dread the knife that it is almost impossible to obtain their consent to an operation. Others again, shrink with horror from the thought of entering the terra incognita of anæsthetization, until it is too late.

Case 1.—Mrs. Y. I carefully tried Dr. J. S. Mitchell's (Chicago, Ill.) Homoeopathic treatment as suggested in a New Method of treating Carcinoma, etc., May, 1889—Epithelioma Cervix

Uteri, it was well covered, powder blower used, with Arsenicum second decimal trit, twice daily, morning and evening, same medicine given internally every two hours, small powder. Death, hemorrhage, after six weeks of a careful, serious fight.

Case 2.—Mrs. S. This case I treated according to the formulas of my brother, Dr. Thomas Linn, of Nice, France. Epithelioma Cervix Uteri, Internally I gave:

℞ Chlorate de soude..... 20 grammes.
Sirop de fleures d' orange 30 grammes.
Eau distillee.....100 grammes.

Local applications of the following powder on a tampon to the cervix.

℞ Chlorate of Soda, subnitrate of bismuth.....a a, 2½ drachms.
Iodoform,..... .....1 drachm, mix.

Strips six inches wide and two inches long of sterilised tarlatan, impregnated with one part of iodoform, 20 parts of Chlorate of soda, and 20 parts of glycerine was also used to pack vagina.

Death came as in case one in just six weeks.

Case 3.—Mrs. W. Having had great success in killing nerves in teeth without pain by simply studying drug action or that the smaller the dose used, the better the results. Why? Because it did not penetrate, it did not stimulate the whole, it killed the surface, sometimes many applications were made before death of the nerve resulted. I applied the same reasoning in the treatment of cancer. Not "Arsenicum paste" however, but a combination of Turpentine and Iodine Flakes, etc.

This case did not come under my care until it had gone the rounds of several physicians and surgeons. Half of the cervix was gone. eaten away extending into Douglas Pouch.

After a positive diagnosis, microscopical, etc., I gently wiped away from around the remaining part of the cervix all detachable matter, (and then, having previously prepared, in small butter dishes, Turpentine in one and the Iodine Flakes in another) I carried a skewer, the end of which was wrapped with asbestos, finer than cotton, it is a good absorbent, does not burn, and clings to the wood; (burn after using) first soaked in the Turpentine or allowed to take up Q. S. then passed into the Iodine Flakes and from there quickly around the cervix and surroundings.

I then carried from a third small butter plate a tampon made from cotton and wool which was allowed to take up about a dr. of Glycerine and Turpentine thickened with gum, a benign combination from which I believe the most part of the cure resulted (as a cure it was, perfect; and sure) the tampon was carried against the cervix and the vagina packed. The Turpentine and Iodine was used thirty days and the Glycerine and Turpentine combination was used ninety days, I believe that the cure will be permanent.

The internal treatment was as follows: Alterative.

Elder flowers	1	oz.
Poke root	1	"
Blue flag root	1	"
Wild indigo	1	"
Mandrake root	1	"
Red clover tops	1	"

Notwithstanding that the preponderance of medical authority in the United States and Europe do not believe that cancer can be transmitted, I firmly believe it to be a contagious disease, and that great care must be taken in making local treatments. Inoculation can come not alone from finger scratches, but inflamed sore throats, may be infected. I should advise all Drs. treating such cases to wear a mouth and nose mask 'especially is this necessary in treating Epithelioma of the cervix uteri with the Turpentine and Iodine flakes.

Surgery Then Hypnotism Especially For Malignant Growths.

By Thos. Bassett Keyes, M. D., Professor of Suggestive Therapeutics Harvey Medical College, Surgeon in Chief, Louis Weinberg Hebrew Charity Hospital, Physician on Hypnotism St. Mary's Clinic, &c. Chicago.

One who runs may read the mighty prophecies, the progress and the evolution of surgery and hypnotism.

All things go on and on, old theories change, science and reason are ever on the alert to explain the shifting scenery of advancement.

Antisepsis and asepsis play the fundamental part in the noon of the drama of

surgery. While the genius of recent technics makes grimaces at the genius of ancient operations.

But I am convinced that much of the surgery of to day will give place in the future to the reparative processes which may be induced by hypnotism.

The very great influence which may be exerted by suggestion over the body after hypnotization is a fact which can be easily demonstrated. The suggestion being accepted, put into action and the effect suggested carried out by the mind automatically, as the patient awakening from somnambulism, will not generally remember, even the suggestions made. The suggestions within the bounds of reason and possibility are however carried out to a certainty. Thus a part may be made to atrophy or enlarge. Sensations of heat or cold may be induced on any part of the body, even rise or fall of temperature may be caused, and the beating of the heart may be regulated. In fact the body acts according to the suggestions made. These and many other like facts have been noted by many observers. By applying them the length of time for convalescence after an operation may be greatly shortened with much better results. After the preformance of any operation when hypnotism is used, suggestions being made to the healing of the wound within a reasonable specified time (much shorter than the average time) the wound will heal invariably as directed.

This I have noted in my own operations and in the healing of various smaller wounds as running sores, tubercular ulcers, &c., (see article by myself in the Memphis Med. Monthly, Dec. 1896.)

The power of the mind over the body to produce effect and influence disease is well known. Thus, probably, it is the mental state which excites the abundant secretion of urine in hysterical paroxysms as well as the perspirations, and occasionally diarrhœa, which ensue under the influence of terror, and the tears excited by sorrow or excess of joy. The quality of a secretion may also be affected by mental condition, as in the cases which through grief or passion, the secretion of milk is altered, and is sometimes so changed as to produce irritation in the alimentary canal of the child, or even death. These things and many others needless to mention show the potency of normal mental influence.

But when suggestions are made to a hypnotised subject they are by far so much more powerful that they can hardly be compared.

More especially is hypnotism indicated after operations for malignant growths to bring the mind to the point where the action of the will is suspended, where the system is influenced by the suggestion in every tissue, where the suggestions are carried out through the nervous and entire system, stimulating and making new forces and bringing the vitality into a proper and given rute untill the results suggested are obtained.

That malignant growths are not so apt to return. I am convinced from the results obtained in the following case.

Lady, aged 49, married, one child 19 years old.

This patient has been operated upon twice for cancer of the uterus. The first operation being done in November 1895. The second in April 1896 consisting of a vaginal hysterectomy with complete removal of the uterus. My first introduction to the patient was in July 1896, at which time she presented the following condition:

She was lying in bed from weakness, being unable to eat without vomiting, this condition had been present for about one week. She was very much constipated, there was prolapses and protrussion of the rectum; a local paralysis of the lower bowel.

On infra-vaginal examination, a foul smell at once attracted attention, there came out over the speculum a nasty chocolate colored liquid to be followed by blood, large clots forming from a raw fistulous tract the former site of the uterus. I could not detect any lymphatic or other enlargements on any part of the body, though from the nature of the disease the pelvic glands must have been affected.

The husband had been told by the physician who did the operation that she could not live but a few months to make things comfortable for her by giving morphine.

In treating her I commenced by producing hypnotic anesthesia, (I refer you to an article by myself on "Hypnotic Anesthesia." The Americam Journal of

Obstetries and Diseases of Women and Children, vol. XXXIV, 1896) and clearing up the wound so far as possible, useing a currett and actual cautery dusting afterward with protoneuclein special and packed lightly with iodoform gauze, this was taken out and new replaced twice daily for the first three days.

While in the somnambulistic stage suggestions and impressions were made that she would not be constipated, that the action of the bowels would be increased, that she would not be troubled by nausea, and further and more particularly that the inflammation and soreness of the wound would dissapear, that it would heal, was healing, &c. In fact terms were dictated to the disease that she would be entirely well and the disease healed in four weeks.

This patient was also placed upon large doses of nux vomican and her vagnia was douched twice daily.

The most marked improvement was due to hypnotic treatment, which was carried out twice daily. At the end of three weeks she was nearly well, the wound healed perfectly, she was up about doing her work, free from pain, free from any of the abnormal conditions above mentioned.

She has been treated several times since and suggestions made that the condition will never return. Sufficient time has not yet elapsed, perhaps, to say that it will not, but from the effects produced and established from hypnotism there is every reason to believe that it will be a perminent success.

Nerves regulate the secretions and influence the changes in the body. By hypnotism we may regulate nerves, from this and from the results obtained in the above case it leads me to recommend hypnotism as the most important part of the plan of treating inoperatable cancer, and also that a course of hypnotic treatment should be carried out after operations for malignant growths, as a means to prepare the system so as to resist and guard against and to prevent its return.

As to the scope of hypnotism with surgery there is scarcely a conceivable operation that will not result more favorably by its use, for the desired immediate and future result. The cure of the patient.

For this reason I recommend Surgery, Then Hypnotism.—Hypnotism after operations for tumors, either benign or malignant (but more especially the latter.

Hypnotism after operations on the osseous system (especially after operations for chronic inflammations either septic, tubercular or malignant.)

Hypnotism after operations on the spinal system (especially Potts Disease.)

Surgery Then Hypnotism. In the orthopedic speciality (particularly after operations for contractures.)

Hypnotism after operations on the joints (especially tubercular disease, as hip joint disease and sinuses.)

Surgery Then Hypnotism:—In the treatment of certain abdominal and gynecological affections. Operations of the latter class may be made much more conservative and a septic uterus being repaired first so far as possible by surgery then hypnotism to influence it to heal. The "change of life" may also be brought about if desired.

Hypnotism in connection with surgery will be found of great and especial importance in the treatment of nervous affections due to reflex causes, first to remove the cause by surgery and as it is well known the symptoms often do persist in these affections, even after the removal of the true cause, for the nerves having been brought into action from persistant and unhealthy stimuli have assumed a functional office. This and the symptoms can and should be remeved by hypnotism.

In this connection let me put great stress upon those operations done in orificeal surgery, on the rectum, on strictures, varicocele, &c., for the relief of nervous symptoms and on Surgery Then Hypnotism. in the cure of strabismus and Surgery Then Hypnotism in the cure of neuresthenia, hysteria, masturbation, chorea, epilepsy and insanity, etc.

100 State Street.

Diphtheria.*

By Dr. P. C. Suttiier.

Among the many diseases to which flesh is heir, there are probably none of more general interest to the physician, than that of Diphtheria. In fact, in its general prevalence, its frequent appearance, its of-

*Essay read before the Hart County Medico-Chirurgical Society, Nov. 25th, 1896.

times malignant character, with its many deaths, and its defiance of all successful treatment of it by us, no disease, perhaps could be more deserving of our higher attention, or again, of our closer study. Such being the importance of this disease, therefore, I have taken it as the basis of the present paper, intending, in this way, to offer you such remarks in regard to it, as I thought might be of more probable interest to you.

Laying aside any further preliminary, and coming more immediately to the subject under consideration, probably it would be unnecessary to say to you, that diphtheria was unknown by name to the medical profession until within a comparatively recent date. It was only some several years ago, in fact, or about the year 1820, that a name was given it, and its true pathological character pointed out by a medical scientist of France. Again, it was some thirty years or more, after this, before the name was scarcely known in our English medical literature, when a translation was made in England of the work on the subject by the French author just alluded to, since which time it has been in common use in all medical literature, generally, treating of disease.

But whilst this is the case, it must not be supposed, however, that diphtheria is for this reason, to be thrown into that rather mythical class of maladies known as "new diseases," or that it never existed prior to the time just alluded to. On the contrary, we have descriptive mention of it under different names, by some of our older medical writers, such as, Hippocrates, Celsus, Galen, and Aretaeus, and also later mention of it before this by other writers, all of whom, however, class it among the throat or croupal affections, making no mention of it as a distinctive disease of itself.

It would be unnecessary to say, that diphtheria is a disease, more particularly, of juvenile life. It is very rarely, however, seen in the young infant, and more frequently occurs between the ages of three and fifteen. It is not often seen in adults, though may occur at any period of life, even in those, exceptionally, of advanced age. I remember that during an epidemic of it in my earlier practice, I treated, among other cases, two females, whose ages, respectively, were some seventy and fifty years. In the meantime, a noticeable feature in these cases, which I have never met with since was that both had cutaneous erysipelas about the face, head and neck, whilst on the neck of the older there also appeared seven rather large phlegmonous risings, which I opened with the lancet. Both recovered, as did all my other cases, some seventy-five in number, the epidemic being of a mild type.

Diphtheria, as you are aware, has like some of our other diseases, its "course to run," which however, as would naturally be supposed, varies with the intensity o the disease. In the *benignant* form, recovery usually takes place in a week or ten days, when the membranes become detached and disappear and the patient gets well. You understand, of course, that this form of the disease is never to be regarded, as a rule with any very serious apprehension, and with good nursing and proper hygienic care, generally gets on well, with but little further attention to it than this. In the meantime, I may add, that it is just here that the physician, if certain of his diagnosis of a mild case, might allay much fear and save much anxiety on the part of parents and others, by announcing it as such, though it may be said that in the "many a slip twixt the cup and the lip," so common in Medicine, we cannot, perhaps, be too cautious in announcing such diagnosis too readily, as we can not always say, at first,how any case may terminate.

But if diphtheria thus has its mild form, and even sometimes so as an epidemic, yet but few diseases, really, are at times more violent in attack, or fatal in result, and thus it becomes, in fact, one of our gravest maladies, to be only recognized and dreaded as such. In its malignant form, it is expected to prove fatal or get better in a very few days, and where the poisoning has been very intense, it may result fatally in even a day, putting at defiance, thus, any and all efforts to check it in the least.

In its initial approach, diphtheria is usually obscure, and difficult of recognition, being often ushered in by symptoms such as slight fever, hoarse cough, debility, &c., not uncommon with children in many of their diseases. So stealthy is it in its approach sometimes, in fact, that there is little or no preliminary warning of it, when croupous breathing, perhaps,

may be the first thing to arrest the attention, when upon examination, the throat is found filled with membranes and the case, probably, already one of fatal diphtheritic croup. Or, again, it may be, that after a day or so of more or less *malaise* when the disease is coming on, the patient might die from blood poisoning, or toxæmia, before there is any formation of false membranes.

So it is difficult sometimes to know precisely when a case is one of diphtheria; and the difficulty is always greatly increased when we are called upon to make a diagnosis between it and some other diseases, which as time it might closely resemble. For instance, when accompanied by erythema, it is sometimes most difficult to distinguish it from scarlatina. Again, when in its early stages, the tonsils may be red and swollen, with it may be some difficulty of swallowing, it might readily be mistaken for tonsillitis. Some years ago, in fact, I knew this mistake made by an old and highly intelligent practitioner, now dead, who mistaking for tonsillitis what soon developed however into a regular case of diphtheria; "lanced" one of the highly swollen tonsils for supposed abscess—cutting the tonsillar artery in the operation, and causing troublesome hemorrhage. There can be no doubt, however, that such mistakes are of more or less common occurrence, and especially so when in their close resemblance, at times, we are required to draw the line between diphtheria and follicular tonsillitis. It is just here that the "tug of war" often comes between physicians, some pronouncing all their exudative cases of sore throat diphtheria, others with similar cases in their hands, pronouncing it follicular tonsillitis. Now, as to whether some of these are more expert at diagnosis than others, it is not pretended to say, yet this difference between these is significant, at least, as showing the difficulty in the way of always making a correct diagnosis in this disease.

Leaving out any mention of the etiology or causative origin of diphtheria, as altogether familiar to you, I come, in the next place, to its symptoms, which, again, although familiar to you, yet in their practical importance and more especial interest, can never probably be too frequently brought before the attention.

The symptoms of this disease, as you are aware, are both constitutional and local. The former are accasioned by the introduction into the system of the diphtheritic poison, while the local symptoms, such notably, as the formation of false membranes, are only a local manifestation of the general disease. "The initial symptioms," says Osler, are those of an ordinary febrile attack; slight chilliness, fever, and aching pains in the back. "The temperature usually rises to 103°, or even more. There may be convulsions in the outset. Again, "the exudate first appears upon the tonsils. * * * Usually by the third day the membrane has covered the tonsils, and crept on to the pillars of the fauces, and even to the uvula, which is now thickened and œdematous, and completely fills the space between the swollen tonsils." At this stage, says the same author, or, "say the fourth or fifth day of the disease, the condition of the child is favorable," and as this author agains says convalescence sets in, whilst any deviation from this "favorable cause results from extension of the local disease, or from systemic infection."

In some cases of this disease cutaneous eruptions are to be seen, resembling measles, the scarlatinal rash, &c., some times confusing in their prominence, the diagnosis, and heading to incertitude, or it may be, at times, incorrect views, as to it. In the epidemic just named by me as occurring in my earlier practice, these eruptions appeared in probably one fourth of the cases seen by me, including the two cases of erysipelas before alluded to, but though I have regularly treated the disease since then, I do not remember their appearance since, save where it may have been in a very rare way. All diseases, however, and especially when they appear in epidemic form, often have their marked peculiarities, and thus what might be common in them sometimes as added features of them, might be even altogether wanting in them at other times. In illustration of this, whilst cutaneous eruptions were so common in the epidemic just mentioned, yet in another epidemic of the disease that visited my professional section some ten years after that they were altogether absent, while serious brain or spinal difficulties presented themselves as the main obstacles to encounter. In other words, all my fatal cases either

died from convulsions or paralysis; the latter always occurring after convalescence had set in.

But not to make this paper too long, I shall add no more on this head; coming in the next and last place, to the treatment of this disease. In the meantime, as you are aware, much could be said in relation to this, but in the limits prescribed for this paper, I shall only speak in brief of the more prominent, and at the same time, more generally pursued treatment of it.

In regard, then, to the treatment of diphtheria, probably nothing could be said in any way very encouraging, so far as this is concerned. In this treatment, as you know, there has been no little variety, including even the much vaunted "specific," though in all the various methods of treating it, all so far have only been more or less disappointing. There is as yet, in fact, no "royal road" to its treatment, nor, again, any specific for it. Our treatment for it so far, in fact has only been in a great measure tentative; and it is unnecessary to say that the boasted treatment of it today, is but too often the rejected treatment of it tomorrow. In other words, we are forced to the reluctant confession that we are as yet wanting in any reliably certain or positively effective means for its treatment. Among the methods of treating it, probably nothing has succeeded over the milder measures, which should they do no good; would at least do no harm. It is now decided that caustic and irritating remedies are not free from ill results, and their use is now to a great extent abandoned. In destroying the false membranes, they may be supposed to carry with them the power to do this at times, but in the irritation or inflammation that usually follows their application, there is danger of an extension of disease, and a consequent doing more harm than good by them. Says an able writer on this subject: "The practice of attempting to destroy the false membranes by caustics or powerful solvents, is unquestionably mischievous. It irritates the parts and destroys the exudative tendency." He further remarks: "Notwithstanding the much that has been written in a contrary sense, yet a careful review of the subject leads to the conclusion that very little advantage is derived from internal local applications; that they are often exceedingly mischievous, and ought to be used with the greatest circumspection;" adding further, that "they do not curtail or greatly modify the natural course of the general disease."

So if we admit this as correct, then we should rather preserve a "masterly inactivity" in our employment of these harsher remedies in this disease; whilst, as just said, our really safe course to pursue, is to employ the mild treatment. For this reason, therefore, it is better to let the membranes as "severely alone" as possible, using only the simpler solutions, as gargle or spray, or such of them as would tend to soothe the diseased surfaces, and aid them in their cure. These milder remedies it is unnecessary to name to you; but whilst we have no remedies really that we could certainly rely upon as strictly curative in this disease, it is altogether proper that we employ those that are simple, soothing and unirritating, rather than those which, by their harshness, might prove potent only for mischief.

Before dismissing the remedial treatment of this disease, I may add that somewhat recently, we have had introduced to our notice two remedies claimed rather as specifics in this disease; or peroxide of hydrogen, and antitoxine. I have had no experience with either of these remedies, but upon a somewhat extensive trial of them now, on the part of the profession, it is not probable, if we are to judge from the general contrariety of opinion as to their utility, that they offer, as a rule, any thing better in the treatment of the disease than what has already been in our possession. In confirmation of this, I have been informed by one of the members of this society, Dr. Hubbard, that he has made quite an extensive use of the peroxide without finding it of any superior value in the disease, whilst our esteemed President, Dr. Scruggs, tells me that he has made altogether an exhaustive trial of antitoxine, without seeing, however, any better results from it than those obtained in the ordinary way. Besides, antitoxine, when administered, has sometimes been so speedily and fatally toxic in its effects, as to cause us to use it with a good deal of misgiving, to say the least of it; whilst sometimes aggravating the disease, or, may be, speedily killing the patient, who as yet may be but little sick,

it is not improbable that it will, ere long, be eliminated from our list of remedies.

In speaking of the treatment of this disease, it is unnecessary to remind you that stimulants are often required where there is depression of the vital powers; and where there is much prostration of strength, they should be given in sufficient quantity, however large, to sustain the vital powers, and tide the patient, if possible, over the "danger line." As a very last resource, tracheotomy may be performed, which some times saves life.

Finally, throughout our treatment, the most rigid hygiene must be observed as well as *enforced*. It is just here, in fact, that the greatest circumspection is called for, if we would have good success in the management of this disease. The room should be kept always at a uniform temperature, say, some 60°, and for this purpose, a thermometer would be better in it. There should be good ventillation, free from all currents of air on the patient, and the bed clothing should be kept so adjusted as to keep up the proper temperature of the body. In fine, this department should receive our most careful attention.

Modern Views of Tubercle.*

By E. P. Hurd. M. D., Newburyport, Mass.

When a foreign body finds its way into any of the tissues of the organs of the economy it becomes an irritant, and phenomena characteristic of inflammation occur. A damage is done to the part, which is soon reflected on the blood vessels, causing stasis; leucocytes pass out and flock around the noxa; the fixed cells multiply, fibrillation takes place and ere long the foreign body is surrounded by a wall of fibrous tissue—is encysted.

Many of the veterans of the late war are today carrying around with them, in some part of their body, bullets thus encapsulated, and doing no harm. The kind of inflammation producing these changes is the same as that which gives rise to scar tissue (granulation tissue) and is a "productive" sometimes called "sclerotic" inflammation. The living elements seen in all productive inflammations are leucocytes (the white blood corpuscles) and fibroblasts, the latter being the daughter cells of the fixed elements (the connective tissue cells). Both probably participate in the formation of new tissue; some regard the leucocytes as the principal factors (Metschnikoff, Marfan).

We will now suppose that an agent of greater virulence, a septic agent, one of the common pus-producing organisms, the golden staphylococcus, obtains access to a part. There is the same stasis of the circulation and emigration of leucocytes and multiplying of fibroblasts, but the damage is more extensive owing to powerful toxins secreted by the microbes. In the immediate focus there is necrosis and gradual melting down of the tissues, while the inrushing of leucocytes surpasses all calculation. They come there attracted by the microbes which they attack, and are slain in countless hosts. Their cadavers constitute the pus corpuscles. The serum in which they float contains fat granules and other tissue debris. The intent of the congregating leucocytes would seem to be to devour the bacteria. (*phagocytosis*, cell devourers). Multitudes soon perish from the toxins generated by the microbe-foe.

Generally, as in phlegmon, the suppuration is limited, the phagocytes triumph, though millions are slain. The outer ring of leucocytes and fibroblasts forms a limiting membrane ('pyogenic membrane' of the old authors) which walls in the abscess, and the pus with its microbic toxins dissolves away the textures nearest the surface and "points." This process is well seen in appendicitis, where the exudate is early walled off from the abdominal cavity by a neo-membranous formation, the product of leucocytes and fibroblasts.

A theory has been advanced to explain why these suppurative inflammations exemplified in phlegmon and peri-cecal abscess do not necessarily become diffused. This is due to the fact that the leucocytes are able eventually to get a mastery over the bacterial foe, (the staphylococcus, or the colon-bacillus). The bacteria finally all perish under the doughty assaults of the phagocytes, which devour them and

*Any resemblances or coincidences between this article and one with a similar title in a late number of the Boston Medical and Surgical Journal are explained by the fact that both articles are by the same writer.

digest them—at any rate, put them out of the way of doing harm.

The case is different with the tubercle bacillus. These bacilli are covered with a hard chitonous envelope, which resists the digestive juices of the phagocyte. They are devoured, but prove "too tough a morsel," and are deposited in some neighboring tissue or gland, ready to begin their work of destruction.

According to Metschnikoff, many of the leucocytes sicken and die from the lethal dose, and the bacillus is set free in all its potency in some neighboring or distant organ. In the case of a fulminant invasion, the blood becomes charged with free bacilli and spores. This seems to account for the diffusibility of tuberculous inflammations.

If now a number of tubercle bacilli find entrance into a part which offers them a congenial habitat, they at once awaken an inflammation. Coagulation necrosis of the protoplasmic elements of the part invaded sets in; this is due to the toxin of the bacillus, and is the first step toward death. There is paralysis of the vaso-motor filaments and ganglia of the nearest blood vessels (the ganglia in the vessel wall which are the immediate source of vaso-constrictive energy); then vascular dilatation, stasis and exudation of formed elements and plasma take place. Leucocytes are extravasated in abundance; these always form a large ingredient of tubercle, which some authorities (though without perfect exactness) have denominated "dried pus." The fixed cells of the part proliferate, and the centre of the mass contains those polygonal cells, called "fibroblasts" and "epithelioids;" these soon suffer coagulation necrosis, being smitten by the toxin, and fuse together constituting the many nucleated giant cells, in the interior of which bacilli are seen. A ring of leucocytes surrounds the outer ring of fibroblasts. This is tubercle. Every elementary tubercle granule or "follicle" is thus constituted. Gross tubercle is simply an agglomeration of these elementary granules.

The giant cells have long processes, forming an open network; the fibroblasts also join in the production of a sclerotic reticulum, which indicates clearly the conservative efforts of nature, and the many points of resemblance between a tuberculous inflammation and an ordinary productive inflammation. Although caseation is especially characteristic of tubercle, yet often fibrillation is the most marked. (In this connection the reader is referred to Plates XLIV and XLVI of Delafield's Studies in Pathological Anatomy, in which the fibrillary changes occurring in tubercle are well shown.)

The living elements seem to be doing their utmost to divide up, contract and fence in the bacillary foyer. This process goes on still more actively in the outer leucocytic ring, which is farthest removed from the bacillary influence; these cells are busily engaged in walling off the tubercle by a strong fibrous envelope. This process called "encapsulation" is the most favorable termination of tubercle. It always takes place when the toxin is not too virulent, and time is given. The noxa is treated just like any other foreign body, the bullet embedded in the flesh, for instance. The bacilli are encysted, and may do no more mischief. Ultimately the encysted mass undergoes granulo-fatty degeneration, is liquefied, and becomes absorbed. Lime salts may be deposited in the interior (cretaceous transformation).

Unfortunately this salutary termination is comparatively rare. If sclerosis is conservative and healing, caseation is destructive. Under the influence of toxins generated by the bacilli, the mass dies from the centre, and becomes converted into a concrete cheesy body of grayish yellow color and softish consistency, in which all cell structure eventually disappears; this is caseation. This morbid process is almost peculiar to the toxins of the tubercle bacillus.

To recapitulate: The elementary tubercle granule is composed of a caseating mass consisting of a giant cell in the centre, a ring of fibroblasts around, and externally to this a ring of leucocytes. In the centre are tubercle bacilli, and the mass soon dies after ineffectual attempts to fibrillate, because poisoned by the bacilli. In the tubercle granule leucocytes may predominate. In pulmonary tuberculosis, much proliferating epithelium from the air passages—also soon smitten in its vitality—is included in the caseating mass. Every visible tuberculous swelling consists of aggregations of these primitive granules.

When the encapsulating process is in-

complete, the bacilli unchecked spread peripherally, also through the blood vessels and lymphatics which they enter. The process of peripheral extension is well exemplified in lupus which is a true tuberculous affection of the skin. When the disease comes through the blood, we generally have the tubercle disseminated as granules or nodules through both lungs (granulosis). When the bacilli are in greatest abundance, coming in the inspired air we generally meet with the pneumonic form (acute caseous pneumonia). Yellow tubercles are an advanced stage of the gray. Tubercle is now known to be a highly infectious product; true tubercle can only be produced through the influence of Koch's bacillus. Of all the other microbe poisons, syphilis and glanders come the nearest to an exact imitation of tubercle.

In all practical discussions of tubercle, the question of "terrain" or soil is no less important than that of the infectious agent.

If the difference between a tubercle swelling and a plegmon is resolvable into a difference between the properties and toxins of the causal microbes, it is plain that "laudable pus" and the pus of a tuberculous abscess ("pathological milk") cannot be altogether alike. Laudable pus abounds in pus corpuscles, which are dead leucocytes that have not yet disintegrated. The pus of a chronic abscess consists of broken down tuberculous material and effused serum, and the microscope reveals little but fat granules, with here and there a fattily degenerated leucocyte. The wall of a tuberculous abscess resembles in general appearance the pyogenic membrane of an acute abscess, but the granulation tissue is infected with tubercle bacilli, and will continue to caseate and soften in spots, and perhaps slowly to invade surrounding parts.*

These notions of tubercle, based on bacteriology, may advantageously be compared with those of a former age when tubercle was a pathological puzzle. Dr. Carswell (Lancet, May 29th, 1847,) says that tubercles "originate from morbid changes in the blood" (!), and Dr. C. J. B. Williams says that "pus, lymph, tubercle pass by imperceptible gradations into each other." He does not think that the exudate in acute pneumonia is essentially different. If there be any difference, it is such as "exists between recently *excreted* (sic) and old pus." Dr. Baumgaertner's views in the British and Foreign Medical Review, for July, 1847, are worthy of reproduction here in their entirety:

Tubercles first appear in small, gray, semi transparent points If such a small mass be removed and examined, it is found to be divisible into smaller masses. If examined by the microscope, these are seen to consist of small granular bodies and globules, the latter being contained in a granular cell, which adheres to the next adjoining cell. Baumgaertner thinks there is no doubt that the formation of tubercle commences with the formation of simple granular bodies, that these cohere, and a globule is formed, and after that a granular cell, the process being in fact analogous to that exhibited in the development of the ovum.

The caseous matter of tubercles consist of small granular bodies which are not widely dissimilar from the formative globules (previously described) of the frog's ovum, such as they appear immediately after the formation of granules. If the caseous matter be in a more advanced stage of softening, it is found to consist almost altogether of globules, or cells containing a granule, their parietes being also somewhat granular. In proportion as the tubercular matter approaches the stage of suppuration, the granular bodies disappear, and the pus-globules (having a cell contained in a cell) become more numerous and interspersed with transparent molecules.

From these and similar results of microscopical investigation, Baumgaertner is led to think that tubercle is a species of false membrane, and that their formative process is analogous, in all respects to the formative process observed in the development of the ovum. The granular bodies are analogous to those of the yelk, which they resemble; out of them as out of the latter formative globules are developed, and then these latter change into cells. Here, however, the analogy ceases. The cells of the healthy process unite together to form the different tissues; the pus-cells remain in this low stage of development.

*Green.

Gastro-Enterostomy.*

By E. B. Smith, M. D., Detroit, Mich.

Modern Surgery has accomplished many triumphs. The prolonged life of many a poor sufferer and his relief from pain, can, in many cases be acredited to some of the very latest steps in surgery, steps which the older surgeons never took.

Modern Surgery is a science. It is an elegant accomplishment stepping in to aid nature, by making fine and delicate touches with such a nicety that the ebbing current of life is turned from its way and flows again in its wonted channel, peacefully and happily.

Surgery as it was first practiced was a child of necesity. A man's leg wus cut off because it was crushed beyond any hope of being of use, or a man dying of some malignant or acute trouble, an operation was undertaken as a last resort. So it followed that early surgery was very crude. But necessity is also the mother of invention and so surgery grew up with her twin sister Invention.

Occasionally, one of these early operations would be followed by remarkably good results, and so it followed that the application of surgery continued to grow until with the advent of asepsis and antisepsis, it was found that with a patient in good condition almost any operation could be performed and the patient would make a good and rapid recovery. A lesson was learned from this that all operations to be beneficial should be early. But the achievements of surgery when applied as a necessity or as a last resort were so great, that it has come in these latter times to be a sort of luxury in the care of sufferers, so that many conditions which were formerly left to cause the patient untold suffering and eventually shorten if not actually end life, are now forced to yield to the art of the surgeon. An operation which has a wide application in this way is gastro-enterostomy.

Gastro-enterostomy was first performed by Dr. Anton Wolfler in Vienna Nov. 12th, 1881, and shortly afterwards by Bilroth. Since then it has been practiced almost universally by all modern surgeons. It was in the first place discovered accidently or more properly speaking, devised without a moments forethought, in the case of a man whose abdomen was opened for the removal of a cancer of the pylorus. It was found impossible to remove the cancer, so this operation was devised. An incision was made into the stomach near the middle of the great curvature and a similar cut into a coil of the small intestine. The margins of these two incisions were then sewed together leaving a free opening between the cavity of the stomach and the lumen of the gut. Strict antiseptic precautions were observed during the operation and the patient made a rapid recovery, the wound healing by first intention. This operation was followed by such relief to the patient and by such an improvement in his local and general condition, that the operation was coesidered a great success.

Many times since has the operation been performed with just as good results, which impresses us with the fact that the operation is just as feasible as it is useful. To be sure many of the cases never made a recovery, but this is not to be wondered at, when we consider the condition of the majority of patients upon whom the operation has been performed. As it has so often been a last resort, a sort of forlorn hope, many, in fact most of the patients have been in such physical condition that they were unfit for any operation whatever, being wasted by prolonged suffering and poisoned by the toxic elements of a malignant trouble, etc.

The conditions demanding the operation are those situated in the pyloric end of the stomach or upper end of the small intestines. As an operation of necessity there is properly only one condition requiring the procedure, and that is, partial or complete stenosis at the outlet of the stomach; but as a palliative measure we find other conditions which will be greatly relieved by such surgical interference. Where pylorectomy is not feasible; where glandular infiltration has become extensive; where extensive adhesion exist between the pyloric and adjacent organs. In malignant disease death takes place from extension due to the mechanical obstruction and not to the disease, as shown by post mortems on the cases.

Ulcers of the pylorus. An indication

*Read before the Second Pan American Medical Congress, Mexico City, F. D November 16, 17, 18 and 19, 1896.

for this treatment occurs when the passage of food over the denuded surface is a source of irratation; small perforations at upper end of small intestines from ulcers or gun shot wounds. The establishment of a short route for the food will keep it from the pylorus and so fulfill the first indications in the treatment of this trouble, it will give the diseased part *rest* and an opportunity to heal. In the later conditions following ulcer where we have any degree of stenosis which in any way interferes with the passage of food, the greater the degree of stenosis the stronger the indicatlon for the opening up of a new passage. Cicatricial stenosis and stenosis fiom other causes may be present, such as foreign bodies or tumors. Of tumors we may have those in the mucous membrane or in the substance of the pylorus itself or of the duodenum; or we may have tumors external to the intestine, tumors of the liver, pancreas or peritoneum, hour glass contraction, and dilation of stomach.

Where we have the symptom of persistent vomiting the condltions should be well looked into, as it is often or always an accompaniment of one of the foregoing conditions. Another suspicious symptom is persistent constipation, though this symptom is more often an indication of some trouble situated in the lower part of the alimentary tract. The H. C. L. is not absolutely pathognomonic.

A case which came under my care last winter, illustrates these points very nicely, the persistency of the vomiting and constipation with the accompanying emaciation and the quick relief obtained from the operation with consequent betterment in general condition.

Mr. M. aet. 35, laborer referred to me by my friend Dr. J. F. McPherson.

When he went to the hospital in February, nothing had passed through his alimentary canal in seven weeks, and he had vomited everything taken into his stomach, the food remaing from fifteen minutes to six hours. The last time he vomited was upon the morning of the operation. After the operation he did not vomit even for the chloroform for three weeks and a half. He was a man who never weighed more than 145 lbs. and at the time he went to the hospital he was reduced in weight to 91 lbs. Now, at the time of the writing of this paper (seven months after operation) he weighs 117 lbs., a gain of over 20 lbs. in less than that many weeks. At the time of his admittance to the hospital he could not walk, could not even stand; but now he nas so gained in strength that he can walk several miles a day, one day having walked from the country to his home, a distance of over six (6) miles.

This illustrates the beneficial results in a case which was not very promising, for not only was the trouble one of malignancy, but at the time of operation, the patient was in an extremely weakened condition.

Hypodermic injections of strychnine should be given several days before the operation. A few hours before the operation it is advisable to wash out the stomach with a warm neutral saline solution, the precaution being taken that nothing is eaten afterwards.

There are many points in the technique of the operation which are of interest.

By most surgeons, the incision is made in the median line. The incision in this location has all the advantages of an incision along the linea alba in a laparotomy. No muscular tissue is incised and from the opening the intestine can be reached. When the enlarged pylorus is found it shonld be followed down until the jejunum is reached which is pulled out of the cavity about six inches. It is emptied by gentle pressure from above, downwards. The opening can then be made, first in the intestine and second, in the stomach. Clamps are not advised, but the hands of an assistant is used to control the hemorrhage, to prevent escape of the contents, and to bring the parts in apposition. A loop of the ileum may be mistaken for the jejunum. Nothajel's test does not seem to be reliable.

The sutures should not be placed too close together, but well down into the submucosa, and not drawn too tightly. If the parts are not impervious then apply omentum splints.

Wolfler simply stitched the edges of the openings so that when the would healed, the opening remained.

Senn has devised perforated decalcified bone plates to be used in such a way that opening is more widely and more surely maintained, besides being inserted with greater ease than the edges of the

wound can be approximated without them. Following the operation the bone is absorbed or passes along down the intestinal tract, and is passed out with the dejecta. But an advance has been made upon this. Murphy has devised a so-called button to answer a similar purpose as the bone button. At present the Murphy button is being very widely used by all surgeons. There is one modification in the way Murphy uses it, which I would wish to advocate. The button is in two sections, in the medium size the weight of one section is three drams, and the weight of the other is two drams and thirteen grains. As Murphy designed it, the heavy end is in the stomach and the lighter end in the instestine. I would advocate the reverse of this, hoping thereby, to gain some additional impetus for its dislodgement and passage down the alimentary tract.

Some foreign operator has advocated and practiced cutting the small intestine through, closing the approximal end and attaching the terminal end to the incision in the stomach.

In cases of pylorectomy, I think an independent opening should be made from stomach to intestine.

After the operation while the patient is recovering from the anæsthetic, a pint of strong hot coffee, per rectum, will materially aid in combating the effects of the shock. Forty hours after the operation, some champagne may be given by the mouth and a few hours later followed by some whey, buttermilk and veal broth. At this time various soups may be given also. After this, the diet may be gradually increased.

Domestic Practice on the Frontier in the Early Eighties.

By F. R. Millard, M. D., San Diego, Cal.

Acute conjunctivitis was treated very much as it is today by the laity, except that calomel, both dry and in water, was more often used. Their treatment of chronic sore eyes seems to have entirely disappeared. Is it because their local remedy has also gone out of domestic use? It was to dip the tip of a feather in the blackest and rankest of New Orleans molasses, and brush over the lining of upper and lower lids, one or more times a day, and to give a dose of sulphur in molasses three times a day. They had great faith in cream tartar and sulphur as a blood medicine, and when I asked why the cream tartar was omitted, the answer was it added to the cost and did not add to its valne.

They had a curious way of treating the eyes of cattle and horses that were injured, but not to such an extent as inevitably to destroy the sight. For two or three days the eye was frequently bathed in cold water, or cold tea, and if improvement was not manifest, a paste was made with powdered ginger and butter and stuffed into the ear on the opposite side of the head, and the ear wound with woollen yarn and as tightly as was safe to do. Senseless the treatment certainly seems, but I have so often been astonished at the improvement twenty-four hours later that I cannot honestly say that I believe it useless. Some effort has been made to find the origin of this curious prescription, but it could not be traced farther back than to the early Dutch settlers in the Mohawk Valley. Whether they brought it from Holland, or whether it originated in the inner consciousness of a Mohawk Dutchman, this deponent saith not.

They appreciated plasters about as highly as their descendants do, and had two kinds. The plutocrat bought his Burgundy pitch, which he spread on sheep or deer skin, home tanned for the purpose. The man who could not stand such expense, made a thin extract by boiling the leaves and tops of thoroughwort, to which he added some tar from the bucket that always hung under his wagon, and continued the evaporation until when cold it was about as hard as Burgundy pitch. This was always spread on paper, and is a greater sticker than the pitch.

Their most popular ointment was made by putting the fresh bark of bittersweet root in lard, and heating until all moisture was driven off. This is still used in some parts of the country.

For cerate they used deers tallow, tempered with fresh unsalted butter.

Their gallipots containing ointments made with lard were carefully covered with pig's bladder, while those made with

deer's tallow were covered with deer's bladder.

A beef bladder and a goose quill was their universal syringe. After recovery from fevers of all kinds, the patient had a hot bath, during which a liberal amount of soft soap was used, and if it was a contagious fever he was then sponged all over with cider vinegar, as hot as could be borne.

During the whole of my professional life, when the materials could be had, my scarlet fever patients had this bath and sponging. As soon after desquemation of the hands and feet as they were able to bear it, the nails were well trimmed, the head shingled, and then the antiseptic cleansing, and no one so treated ever afterward carried the contagion to another person. If it does not kill the last microbe, it so completely takes the fight out of him that he is willing to let people alone. But the soap must be lye soap with an excess of alkali, and the vinegar old cider vinegar that is not killed by a little boiling.

The common treatment for chronic bronchitis and incipient consumption, was the inhalation of steam from vinegar. The effort made a few years ago to revive this old treatment failed, and mainly, I believe, because good vinegar can so seldom be found. For this use whiskey vinegar is worthless. Good wine vinegar has some value, but is inferior. This is no more singular than that the therapeutic result after administering salicylate of soda from carbolic acid, is not the same as it is when the salt is derived from oil of wintergreen. Yet the maker brings in the chemist to testify that they are identical. The chemist with his reagents can detect no difference between lithium carbonate from petolin, and the same salt from lepidolite. But the spectroscope tells from which mineral each was obtained.

For lumbago, a piece of brown paper was well saturated with vinegar, laid on the back and rubbed until dry with a flat iron as hot as could be borne.

They appreciated the value of fixation for badly sprained joints, and for this purpose applied a bandage of several thicknesses of slazy flannel with the same care that the modern surgeon applies his plaster dressing, and then saturated it with a hot, strong decoction of wormwood in vinegar, supersaturated with salt. Two or three saturations make it almost as unyielding as the plaster bandage, over which it has the advantage that it can be resaturated when deemed necessary. I have never been absolutely sure that the results are any better than they were by the old log cabin plan. Their tinctures were all made with corn whiskey by the rule of thumb. A bottle was filled with the cut root bark or herb, and then filled with whiskey. The rule for seeds was to fill the bottle only half full. They had a few other uses for whiskey, such as celebrating births, weddings and funerals, and the 362¼ other aniversaries of the year. It was also much used to manufacture weather for individual use.

They had a sure cure for toothache, which at the same time prevented decay of the teeth for the remainder of life. To take the cure required a companion, a forked stick, and a rattlesnake with at least four rattles. The rattler must be of the gold badge kind. The black swamp rattler was no good. First get the snake, then while the companion held its head to the ground with the stick, the patient took the tail in his left hand and proceeded to crush the whole length of the spine with his teeth.

I knew a good number of women as well as men who had taken the cure, and all declared that all pain disappeared with the first bite and never returned, and that teeth that were already decayed crumbled away and undecayed teeth were perfectly preserved. One of our neighbors, Mr. J., when a young man, was so impressed by seeing the suffering his mother underwent from toothache, that he determined to avoid all such trouble himself by taking the gold cure, but thought the companion unnecessary extravagance. All went well until the job was nearly done, when his right hand sliped down so low on the stick that the snake got in a bite on the elbow. J. finished the job and then treated the arm. After he reached middle age I heard him declare he would do it all over again rather than have toothache.

How to Prepare Catgut.

By I. S. Stone, M. D., Washington, D. C.

When Dr. Edebohls gave his method of preparing catgut to the profession it seemed that he had attained the desired

end, namely, a perfect suture material which was absolutely sterile.

As his method necessitates boiling the gut in alcohol and also hardening in chromic acid solution, it has never been generally adopted. When any busy surgeon wants absolutely perfect material of this kind he will find it necessary to prepare it for himself, and he cannot give much time to even this important matter.

By the method of Edebohls and others we get a very reliable and perfectly satisfactory material, but it does require more time and gives much more trouble than is necessary.

For the past six months the writer has been using formalin for the sterilization and hardening of catgut and has found it a perfect method, and the resultant material absolutely satisfactory. Sizes "o and 1" are selected, cut in pieces 18 to 24 inches long, and wound in loose small skeins. Throw these into cold water to swell the catgut so that the formalin solution will penetrate deeply into its folds. This is very important.

Some experiments have been made which show the writer that the gut when wound on glass spools, and thrown into formalin, becomes so contracted and firm that it is spoiled and there is room for doubt about the entrance of the fluid to the centre of the gut. The gut then is thrown in loose coils into water, where it should remain 12 to 24 hours. It is then put in a 5 per cent. solution of pure, fresh formalin, such as we obtain from shops, (which is really a 40 per cent. solution). The gut should remain in the formalin solution 24 to 36 hours, when it must be removed and placed in absolute alcohol for permanent preservation.

Dr. Senn has already told us that it can be boiled after being thus treated, and I have boiled some for ten minutes in water when it was found quite as strong as before, and as strong as catgut can be made.

Note the difference in the methods, the simple one which any one can use without loss of time, the other methods all requiring the greatest care. I keep on my office table a wide mouth jar with rubber cap and glass top with 8 oz. of formalia solution always ready for the gut. When I find my supply getting low it is only necessary to cut the long pieces of gut into shorter ones, (to prevent tangling when thrown into water,) immerse in water for a few hours, then put in the jar of formalia solution and if wanted for use, it can be ready in 24 to 36 hours. If the gut should get dry or become soiled in any way, it can be boiled as above suggested. The two numbers are the only ones necessary for any surgical work. Those who do hernia operations may leave the gut rather longer in the formalia solution and No. 1 should be used. The cat gut will remain in the shin ten to fourteen days when the ends will easily come away. The various vainal and cervical operations rarely need larger gut than the smaller mentioned. Some may enquire if kangeros tendon can be prepared in this manner. I have not tried it, but can say there is no need whatever for the material. The average surgeon needs a less expensive material, and the tendon is rarely to be had of even size and length. Since the writer has adopted this method he has had no wound infection from strucure material.

Chronic Joint Disease in Children.

This was the subject of a paper read by Dr. G. F. Still at a recent meeting of the Royal Medical and Chirurgical Society. He said:—"The purpose of the present paper is to show that although the disease known as rheumatoid arthritis in adults does undoubtedly occur in children, the disease which his most commonly been called rheumatoid arthritis in children differs both clinically and in its morbid anatomy from the rheumatoid arthritis of adults; it presents, in fact, such marked differences as to suggest that it has an eotirely distinct pathology. The cases hitherto grouped together as rheumatoid arthritis in children include, therefore, more than one disease; and it will be shown that there are at least three distinct joint affections which have thus been included under the one head rheumatoid arthritis. Girls are more commonly affected than boys; sevenof the twelve cases were girls and five were boys. The onset is usually insidious; the child, if old enough, complains of stiffness in one or more joints, which slowly become enlarged, and subsequently other joints become affected; but occasionally the onset

is acute, with pyrexia and, it may be, with rigors. Perhaps the most distinctive feature in these cases is the affection of the lpmphatic glands. The enlargement is general, but affects primarily and chiefly those related to the joints affected. The glands are separate, rather hard than soft, not tender, and show no tendency to break down. They may become so large as to be visible, but more often do not become larger than a hazel-nut. The heart shows no evidence of valvular disease, but hæmic bruits were detected in some of the cases. There were some physical signs suggestive of adherent pericardium in two out of twelve cases. The disease in children differs from that in adults clinically in the absence of evidence of bony change in the joints and in the presence of enlargement of the spleen and glands. The most striking difference in its morbid anatomy is the abshnce of fibrilation of cartilage even in an ndvanced case and the absence ofosteophytic change; the aoection of the cartilage is only secondary, and then different from that found in rheumatoid arthritis; thickening of the capsule may be extremely marked."

Pathological Study of Typhoid Fever.

In the January number of the Atlanta (Ga.) Medical and Surgical Journal, appears "A Pathological Study of Typhoid Fever," by C. M. Blackford, Jr., Instructor in pathology and bacteriology in the Atlanta Medical College. After a short sketch of the history of the disease, and the slowness of its differentiation from typhus fever, a distinction, by the way, which he claims for Dr. T. B. Anderson of Virginia, who announced it in 1819, six years before Louis of Paris, the author describes the lesions found in the intestine as a result of the infection. These lesions are first a swelling of the glands, making up pyers patches, then a degeneration of the glands and their ulceration. The essential cause is a bacillus first recognized by Eberth in 1880, and obtained in pure culture by Gaffky in 1884, which bacillus is described by Sternburg as "a motile, ærobic, non-liquefying bacillus, which grows readily on a variety of media at room temperature. "The ulceration is produced partly by coagulation necrosis but in large part by the digestive action of a peculiar ferment elaborated by the bacilli, possibly similar to the one made by the bacilli tuberculosis that softens the tissues in the neighborhood of the tubercular area. This ferment has not yet been isolated, but work is now progressing in the laboratory of the Atlanta Medical College with this isolation in view.

As the disease is merely an infection by a specific organism, it is preventable. In the infinite majority of cases, the infection occurs through polluted drinking water, so often in fact that it may be stated that "every case of typhoid fever is a case of water poisoning. "Instances are given showing the obscure ways by which the water may become polluted, and the means by which this pollution may be detected are given in full. Briefly, these depend on the power of the bacillus typhosus to live in a slightly acid medium and one containing 0.05 per cent. of carbolic acid, media on which other water bacteria fail to develop. Another test, simpler than the last, is merely to grow the suspected culture in an incubator at a temperature of 40 C., at which the common organisms fail to develop but the typhosus grows luxuriantly. If there are many cases in a community, the water should be examined with care, either by the physician or some competent bacteriologist, for there is no more fruitful source of dissase than

> "The old oaken bucket, the moss-covered bucket,
> The home of the microbe that hangs in the well."

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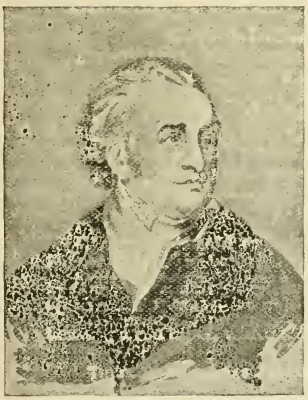

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The chief objection to Christian science is that it is neither Christian nor science at all, but pure and unadulterated humbug. The idea that faith, ecstacy, enthusiasm or self–hypnotism can modify, control or effect the physiologic processes or that the *vis medicatrix naturae* could be so juggled with as to cure disease, destroy germs or other morbific agencies is too absurd to be entertained by a rational mind. Christian science so-called is a phase of psychiatric degeneration and is in form a type of ego-mania. It strives by a species of self-exaltation to effect therapeutic changes. It is an obsedent idea which gradually causes the possessor to degenerate into a form of mentism when he is fully convinced of the truth of the doctrines of faith cure. The symptoms of the disorder are *variously* manifested and when first detected the victim should be isolated from contact with all factor destined to add to the disturbance and a rigid surveillance maintained. The prognosis of the cases will vary with the degree of severity or total loss of common sense. The worst form are those cases when the patient yields to the besetting ideas and the whole field of consciousness becomes contracted and dominated by the central idea so that the voluntary intellectual activity of the brain is reduced to a mininum. The most hopeful class are those who early recognize the morbid character of their delusions and have sufficient mental control to throw them off. Physicians who come in contact with this class of disorders will find the foregoing suggestions of valuable aid in managing this class of afflictions. Small and repeated doses of common sense will eventually restore the mental equilibrium and the delusion will depart.

"CONSISTENCY THOU ART A JEWEL."

The advent of anæsthesia by inhalation was the greatest medical triumph of the nineteenth century, outstripping in importance even antisepsis. Previous to its discovery the operating room was the terror of humanity and often resembled a miniature madhouse. The pain and shock of operation were both to be borne by the unfortunate patient. Sometimes he asked for, and was given a partial anæsthetic by the mouth. This agent was always alcohol. The surgeon now puts his patient under the influence of a modified alcohol-ethel oxid or methel terchlorid by inhalation. He passes through the stages of excitement and rigidity into the third, or stage of relaxation, where he is on the borderline between time and eternity. Voluntary motion, sensation and volition have departed. His cardiac, respiratory and vaso-motor centers alone are living. If these vital centers slip a cog or two, then the motto "Similia Similibus curantar" is honored, laws of toxicology and antagonism are thrown to the winds, and the life of the unfortunate is futher jeopardized by the hyperdermatic administration of more narcotic and anæsthetic-alcohol. By what process of reasoning this conclusion was arrived at, is still unknown and may be added to the long list of things which we never will know. Why alcohol is given to antagonize the danger signals of the stage of muscular rigidity when trinitrin and atropine are clearly indicated and in the stage of paralysis when ammonium and especially the king of cardiac respiratory and vaso-motor stimulants strychnia are indicated, is a mystery beyond our apprehension. It is well known in chemistry that alcohol radicals behave like the metals in combining to form compounds. No one would ever think of administering elementary potassium as an antidote or antagonist, in a case of poisoning from a compound of potassium. Further we never use ether or chloroform to antag onize the effects of a toxic dose of alcohol. May the time soon come when we may blur, blot or erase from every text book

the inconsistent teaching that a plain alcohol will antagonize the toxic symptoms from a modified alcohol.

THE COMING PHYSICIAN.

The twentieth century is sweeping rapidly down upon us. We have already a twentieth century practice, a twentieth century girl, the coming race, Bellamy social scheme, the coming woman. Why not in our mind's eye, view the coming medical student, the coming medical college, the coming physician. These may already exist to some extent, but at best only in their embryonic condition. The coming physician will have a large amount of personal magnetism, the highest grade of morals, a thorough preliminary education as well as thorough medical training. As a medical student he will be as cleanly, tidy and careful in his school rooms, as he is in his sweetheart's parlor. The coming physician will be trained in the coming medical college. It will be a State institution. Not under the control of corrupt politicians, but under a government which will value its educational institutions as it values its existence.

The term will be continuous of eight months duration. No Spring term or Spring faculty. The coming medical college will always have a chair of preventive medicine. Its rank among the chairs will not be tenth, twelfth or twentieth, but first, because *it should be first.* Surely it is more reasonable, more humane, more noble to prevent than to endeavor to cure disease after it is propagated. Two factors will govern the selection of teachers; first, knowledge of the subject to be taught, and second, ability to impart that information to the student. Fewer subjects will be taught and the essentials of each subject will be so emphasized—this is very rarely done now—that the student can easily determine which are *the essentials* and which are only factors of minor importance.

The coming physician—in the era probably approaching—will be fitted for and employed mainly to keep people well. He will examine each of his patrons every three months and give necessary instruction about how to keep well. For this service he will be paid larger fees than he now collects for attending the sick. He will use only a few official agents when called on to attend the sick. These remedies he will know how and when to employ. If the coming physician is a bacteriologist he *may* be able to tell us, that the grippegerm carries a sword, is armed with spikes, and has hooks in his tail. (?)

The coming physician will not worship fads, even for a season. Statistics showing the large number of cases cured with aseptolin and similar agents, will only cause a shrug of his shoulders. Medical frauds, leeches and sharks will be unknown, and only to be seen stuffed and kept in museums as curiosities handed down from the nineteenth century.

THE NEED OF ORIGINAL THERAPEUTIC RESEARCH.

To every thinking mind it must be apparent that our profession should detail at least a part of its army of pathological, anatomical, physiological and especially its bacteriological investigators to form a corps of therapeutical explorers.

We have made vast clearings in the forests of obscurity behind which lurked the man-destroying giants, tuberculosis, typhoid fever, diphtheria, pneumonia and others. We have found the element of the cause of many diseases, notably those just mentioned, have proven their origin, produced their growth by cultivation, and by inoculation have caused their respective typical diseases, so that we are satisfied as to their being the prime cause of these diseases in the human body, but we are forced to halt after this has been said and admit that our therapeutics are by far too ineffectual, especially as pertains to the most fatal diseases.

These facts being evident, let it be hoped that our medical schools will establish laboratories for the prosecution of study and original investigation of the curative powers of all substances likely to prove of any benefit.

Modest private laboratories could be arranged without great expense so that the practitioner might use his spare hours in original study of this branch and thus break away from the traditions of authors and, perhaps, add to our stores of knowledge.

PAIN.

Considerable discussion has been going on recently in the lay press anent *pain*, in reference to what pain really is, its uses, significance and the comparative immunity to pain of the sexes. One writer discusses it in connection with its uses, another in reference to woman's greater ability to bear it, while the erudite and literary Dr. S. W. Mitchell, at the recent Boston celebration of the semi-centennial of anæsthesia, delivered an address on "the Birth and Death of Pain." The subject had so many phases and diverse purposes that we cannot hope to compass it in a short article and propose only to note some of them with the hope of defining its true position in the economy of life and noting for our readers some of the beneficent purposes. We will not attempt to discuss it in all the multiple and varied forms by which it is manifested in disease and diseased conditions, but in its connection with the social being chiefly, incidentally however alluding to the importance of pain as a diagnostic symptom, and indicator of diseased conditions of the physical man. We beg to differ very much from Dr. Mitchell's assertion in his beautiful and otherwise logical address, that pain "is a riddle to which the earth can give no answer."

It is not reasonable to think that man in all the long years since Adam's fall from the Garden of Eden, and from that pure manhood and true physical type of being, free from sinful indulgence and its baleful consequences, should not have alike divined its meaning and purposes to some extent akin to the truth. Its counterpart ecstasy, beattitude represent a state of physical happiness, well being, freedom from suffering, behind which is the straight and accurate conduct of ones physical self according to nature and nature's inimicable laws Divinely planned, often approximated if not realized. Its synonyms "dolor," "algos," "Donleur," and "Schmerz," denote grief, an opposite state to that of ecstasy or beattitude, and one in which the stings and pangs of suffering has given trite consciousness of some act violative of some one or more of the governing laws of our being. It is therefore the special supervisor of the social being in all his voluntary acts prescribing the limits of endurance on his part and the sphere of his social powers. Pain then is the causal factor of proper conduct, the guerdon of duty and the mainstay of honor, a director and indicator for the exercise of physical and physiological energy—compelling attention to rest and sleep, and to the reparation of a digression from the right, an injury or a solution of continuity, whereby the social man is incapacitated.

The pain or distress and weariness of the physical man causes him to take rest and sleep, while the tortures of hunger enforces the taking of food; the pain of a broken limb will cause the average man to seek its reparation. It is therefore a corrector without which the civilized man would not devote the necessary time and trouble to reparation or recuperation, and would lapse by and through neglectfulness into barbarian or the brutal condition. It is the most forceful factor of the physical, mental and moral spheres of man and its value is recognized, or at least felt, in all spheres, all conditions and phases of life. Instances, even proof of its value, could be named ad infinitum, but are unnecessary.

The best and most beautiful explanation of pain is contained in the following expression; that "pain is the cry of the nerves for healthy blood"—admonishing us that by heredity, or *per se*, we have violated some natural law, and as a consequence the elements of disease, some toxine ptomaine or alien germ is coursing our veins and expending its virulency upon our nervous systems, the abiding place of pain: its absence on the other hand may represent an abeyance of nerve sensation and power to constitute disease. Pain is not an exceptionable fact in the experience of man as long as he has nerves, and we cannot kill it or eliminate it from the sphere of the social man—the physical or moral being. It is stated that the lower classes of mankind bear pain better, and the poor better than the rich, though in the demography of the races, statistics have proven that the more highly civilized the being is the greater his cell life resistence, and as the case may be, his ability to endure pain and hardship. Dr. Ottolenghi claims woman to be less sensitive to pain, which he claims to have proven by Edelmann's faradimeter tests, and that the higher classes of women are

the most sensitive and the degenerate the least so.

We have one consolation in this, as he contends that it is due to her inferiority to man as the uncivilized and degenerates are least sensitive to pain. Individual susceptibility to pain differs very widely, while some individual tissues, as cartilages, are near the seat of pain. "The essence of pain lies in a disturbance of the organization of the nerve at some point in its course."

We do not endorse the assertion that pain is a riddle and unanswerable when so many evidences of its divine purposes exist. As an aid to the physician in diagnosis its worth to us is incalculable, while to overcome, lessen and prevent it is a goal we all should aim at. It is well enough too to study it not alone as a diagnostic grunt, but in the light of its manifold objects and teachings which compasses the sum of life.

ELECTRO-THERAPEUTICS.

There are few persons in the world better informed upon general topics than the well educated physician, but, upon the subject of Electro-Therapeutics, the average physician acknowledges that he is ignorant; nor are we surprised at this, when we consider the immensity of the subject, and the time required to get a working knowledge, to say nothing of the time it takes to keep his apparatus in order; hence, very little interest is taken in the subject by many, and when asked by their patients if electricity will benefit them, usually give an evasive answer, or tell them to "take a shock and see."

The science of electricity is exact and profound, and while we cannot satisfactorily define it, or say exactly what electricity is, we know that it is governed by well established and immutable laws. It has taken civilized man twenty-five hundred years to unravel the mysteries bound up in a little piece of amber in the hands of the old alchemist, six hundred years before Christ; but, one by one, its laws have been discovered, and as the secrets of this most potent agent are, more and more, discerned, physics, chemistry, mechanics and medicine are revolutionized. From the discovery of Farady, have evolved the dynamo and electromotor, which have set the wheels of commerce in motion, utilized the immense power of the great Niagara Falls, furnishing cheap power to factories in the immediate neighborhood, connecting Niagara and Buffalo by an electric line, as well as lighting both cities, and supplying power for all their electric railway systems.

The medical profession has been, long and laboriously, working to utilize electricity in the treatment of disease, and from the pith ball experiment, has gradually been evolved our present static machine; from the frog's legs of Galvani, the galvanic battery, and from Faraday the induction coil. All other forms of electricity are merely modifications of these. With these, and their modifications, the paralysed muscle is made to attract to itself a fresh blood supply, which feeds the impoverished muscular fibres, cells and wasted nerves, frequently bringing new life and new strength to these parts. Inflammations are often dissipated, and healthy action is set up in the diseased structure. Neoplasms are destroyed, even to the extent of removing by electrolysis immense tumors. Hairs are removed and other blemishes driven from the face. Ozone is generated and perfectly controlled in its administration, and many other beneficial effects are produced without causing *shock*. In fact, the known laws of resistance are utilized in medicine as in mechanics, and, without the knowledge of these and other laws, the currents should not be applied, lest the patient receive a shock, which will inspire a dread of the treatment, sufficient to prevent him, ever afterward, from availing himself of its beneficial and curative virtues.

NEURASTHENIA.

Neurasthenia is a functional nervous disease well worth the careful study of any physician into whose care the unfortunate patient may intrust the care of his case. As a rule, he is very intelligent and of the better class, consequently we find few of these cases in hospital clinics.

All modern authorities write upon this subject, and it is quite interesting to note the manner in which different authors treat the same subject. Dr. W. S. Playfair, in Quain's Dictionary of Medicine, speaks of this disease as occurring almost

exclusively in females. Dr. Danna, in his text book on Nervous Diseases, says that men and women are affected almost equally, the pure cases being most frequently in men, while in women they are, more or less, complicated with hysteria and spinal irritation. Dr. Geo. M. Bayard, during his life, wrote extensively on this subject, and in his experience men were more often the subject of this disorder than women, and the neurasthenic woman was usually exempt from hysterical symptoms. This has been the experience of Dr. Bishop of Washington.

A few French alienists classify these cases with the milder forms of insanity. It is natural to conclude that, when eminent neurologists differ so materially in their opinions as to the nature of these cases, the busy general practitioner should find himself, more or less at sea in handling them, and a mistaken diagnosis is often the result of the most careful examination. Different cases, at different times, simulate nearly every form of organic nervous disease, and patients in well advanced stages often appear to have nothing the matter with them at all. These are undoubtedly objects of our commiseration, and require the most skilled and careful attention.

Electricity, by virtue of its stimulant, sedative and tonic action, when cautiously and properly applied, seems to do more for their relief than any known agent, and its use has to be varied to suit each individual case.

DR. LISTON H. MONTGOMERY.

We have information that the above named gentleman will be a candidate for the office of Secretary of the American Medical Association at its forthcoming meeting in May at Philadelphia. As is well known to the members of that body there has been more or less dissatisfaction with the present incumbent of that office on the score of his age.

Dr. Montgomery is a gentleman of large medical and clerical experience as Secretary of the Chicago Medical Society and would prove the proper person for the office for which he is now a candidate. He was born at McCutchenville, Ohio, August 21st, 1848. He began the practice of medicine in Chicago in 1871, where he still resides. In 1877 he joined the A. M. A., and in 1887 he was Assistant Secretary of that body at the Chicago meeting. He has been successively an officer in the Section on Surgery, Anatomy, and State Medicine. He has been a frequent contributor to domestic and foreign medical journals, and is well and favourably known by the entire profession of the country.

When the occasion arrives we trust that his friends will see that his interests are taken care of. The Association needs and demands that its business shall be carefully and rapidly dispatched, and in order to accomplish this it must be placed in the hands and under the control of active, vigorous, business men. Methods of the past with their shortcomings and tardiness will not do for the medical organizations of the twentieth century.

WHAT KIND OF BATTERY?

Numerous letters are received asking "What kind of battery is best for the general practitioner?" or "What make would you recommend?"

We do not know that it makes any material difference who makes a special form of battery, so long as it is well made. Each manufacturer naturally claims to make the best.

Do not purchase a faradic battery with a solid coil. It does not demagnetize readily enough. The wire of the secondary winding should be, at least, two or three thousand feet in length, and so arranged as to occupy space as near the primary coil as possible, and the insulation of the windings should be perfect; the more turns there are, and the nearer they are to the primary, the greater number of turns will the lines of magnetic force be cut, and the stronger will be the electro-magnetic current.

The primary should be of coarse wire, with from two to four layers around a bundle of soft iron wire; the vibrator should work softly and evenly; the secondary coil should strike evenly over the primary, which may be marked in inches and the fractional parts thereof.

The generating cell should be large, with plenty of zinc surface exposed. A rheostat should control the generating current going to the primary coil, and as the vibrator begins to lower its tone, more

current can be turned on at the rheostat, thereby regulating very nicely the generating current, while the secondary is regulated by the marks on the primary, showing exactly how much of the secondary there is in circuit.

There are a number of good portable galvanic batteries on the market, any one of which, under intelligent direction, will give satisfactory results.

For convenience, dry cells are best, but for efficiency, fluid cells are far superior. For careful work, a good Milliamperemeter and a rheostat are very necessary.

LABORATORY VS. CLINICAL INSTRUCTION.

We were amongst those who early advocated the extension of laboratory teaching in medical schools, and gladly welcomed the epoch of more thorough teaching of Physiology and Pathology which resulted from bringing the student into that personal contact with normal and diseased structure, which requires the trained use of the microscope. We may therefore be permitted to inquire, if there has not of late been a tendency to carry to an extreme, not only laboratory requirements and work, but instruction in detail matters, which however important in the scientific study of disease, must ever be subordinated to facility in generalization to be of value in the practice of our art? The student of today in his four years of study has little opportunity to familiarize himself with the object of his labor, man suffering from disease. Of the special parts entering into that organism, he has learned a great many facts; with the life history of,—"foes intestine. what a numerous brood," he has become familiar, and can trace their generations in the culture chamber, and find the wreckage of their warfare in the field of the microscope. But there has been a gradual lessening of the opportunity to become skilled in the environment under which the organs perform their functions, and the materies morbi find their opportunity. As a rule it is to special courses after graduation that the student is compelled to look for the concrete he requires for practice.

The methods of teaching generally are approximating towards the natural process of learning; it is in medical teaching that we find the rule departed from, and long years of instruction in abstract details made to procede the study of the whole individual in health and disease. The tendency to highly specialized application of the art, does not need this stimulus to contract the horrizon of appreciation. We know a very intelligent man who both in business life and through early training has been the associate of members of our profession of the highest standing, who fails to see anything ludicrous in being under the professional care of three men at once, the one not knowing of the others attendance, one specialist treating the nose and throat, another his ears, and the third looking after his respiratory system.

Now we know that in the majority of ear troubles the treatment of the nose and pharynx is of the highest importance; we are also recognizing the fact the majority of the cases of lachrymal obstruction have their origin in nasal conditions; sometimes a harrasing cough, which has taxed the patience of the throat specialist has been relieved by attention to the external ear; an iridectomy has often relieved a neuralgia that has perlexed the neurologist, and a pair of glasses cured the headache that had been pursued by the gynecologist. Either our medical teaching must develop a broader view of "the harp of a thousand strings" in the professional mind of the next generation, or our posterity will hail Woods Hutchinson's "general specialist," whose function shall be to map out for the invalid the relative necessity and amount of attention each organ and viscus ought to receive.

MEDICAL JOURNALS CONSOLIDATED.

We have received the first issue of the Fort Wayne Medical Journal–Magazine, which represents the consolidation of the Journal of the Medical Sciences with the former periodical.

The Fort Wayne Medical Journal has been established for sixteen years and has achieved a prominent and commendable position among the medical publications of the West. We understand that the new Journal is to include both of the old editorial staffs in its working forces, and we predict not only a successful but a brilliant career for the new publication.

MEDICINE AS A SCIENCE.

We often hear medicine decried for not being a science. Medicine as a generic term signifies a great deal. Certainly no one would contend that every part of medicine had reached a position where it can be considered scientific. Yet the fact remains that many parts of medicine or departments of it are truly scientific. To enumerate we can affirm that physiology, anatomy, surgery, and several of the specialties, are really scientific. Diagnosis is strictly a scientific procedure as a method, and while it often falls short of comprehensive knowledge of the case in view, still the method and its application is scientific. All diagnosticians are not scientific, yet there is a scientific method of diagnosis if only they will employ it.

Medicine as a completed scientific system is not a possibility of the human mind, owing to the nature of the data involved. But that it will continually grow, and more and more approach this standard no one can deny. The father of medicine observed, recorded and classified his facts as far as his opportunities would permit, and to this extent he was scientific. There is a science of medicine.

ICE IN THE TREATMENT OF LOBAR PNEUMONIA.

It has been asserted by well informed observers that the death rate from lobar pneumonia under many of the treatments now in vogue is as high as from the let-alone-plan of treatment.

In order to discuss the ice treatment it will be necessary for us to bear in mind the bacteriologist's claim that the pneumococus of Frænkel is the specific cause of this disease; and the sudden checking of the skin excretions and chill being secondary processes resulting from the absorbtion of the toxins into the general circulation. If this be true then the patient frequently dies of the toxæmia instead of heart exhaustion due to pulmonary obstruction, and the main indications for treatment would be the elimination of the toxins and supporting the patient's tolerance. The question now arises can these indications be met with the ice treatment? This question cannot be answered until its advocates can agree on its mode of action. Some observers attribute the benefical results noted—by them—to the abstraction of abnormal heat, lowering of vital resistance, or in other words antiphlogistic action. A larger number of observers believe that the continuous application of ice to the chest brings about a reflex stimulation of the vaso-motor nerves supplied to the semiparalyzed pulmonary blood vessels. The first theory may be true to some extent in the first stage, and the second theory in the second stage. If, however, the second theory be the correct one, why not apply the ice to the feet or hands? In fact if ice is to be continuously applied to a limited area for its tonic effects on the vaso-motor center in the medulla, why not apply it directly over the centers?

The local application of extreme cold seems to be very much like imitating the mode of action in ordinary chill from a draught of cold air.

If lobar pneumonia is a germ disease we can see how the cold bath (68° F) of the whole body for a limited time can abstract some abnormal heat and markedly stimulate the vaso-motor centers, increase blood pressure, diuresis oxidation, the elimination of waste and toxins, but the rationale of the local use of extreme cold is yet at best only under probation. Disease may be defined as any structural or marked functional departure from the normal standard. Nature hangs out certain signals of distress, upon which may be based the indications for treatment. If vaso-motor tension is too high for safety, it is usually advisable to moderate it. If it is too low, the indication is to raise it to the normal standard. The latter can in all probability be done more safely and satisfactorally with strychnia or the Brand method.

FEMORAL HERNIA.

Attention has recently been called to gastro-intestinal disturbances, resulting from reducible or rather spontaneously reducing hernias, especially inguinal and those of the median line. We have long been convinced that femoral hernia especially in the female, plays a more important part in gastro intestinal disturbance, than has been generally recognized. Recalling the anatomic fact, that at

least one woman in fifty, and probably one in twenty-five, has the crural condition permitting the escape of viscera from the ordinary limits of the abdominal cavity; we cannot avoid the inference that femoral hernia often escapes recognition. The reasons are obvious; femoral hernia seldom causes noticeable enlargement; the protruding portion of intestine is ordinarilly small and empty; it does not respond to the cough impulse as a rule; patients learn to relieve themselves from painful disturbances by position, the symptoms are not pathognomonic and are often strongly suggestive of other lesions. The patient rarely attributes the discomfort and even pepetual invadlidism to any localized cause, but complains of painful locomotion, recurrent vomiting spells, alternating constipation and diarrhœa and flatulence; mucous intestinal casts even pus and blood in the evacuations are found at times, there may be rectal and vesical tenesmus, while all of these symptoms may arise from other causes, it is nevertheless possible for any or all of them to be caused by the temporary and recurring descent of small portions of intestine into the crural canal. So long as strangulation is escaped, it may be very difficult to exclude other diseases of the digestive tract, and it is not until the co-operation of the patient enables the surgeon to examine the crural region during a period of disturbance, that the possibility of such hernial protrusion can be eliminated.

THE NEW ANTISEPTIC AGENT FORMALIN.

The introduction of new antiseptic agents in the past few years by our enterprising pharmacists based upon their discovery by scientist and clinicians, oftimes from their own laboratories has assumed such proportions as to bewilder and render selections for clinical trial a somewhat doubtful task as to the meritricious among them. None of them, however, have been so widely and favorably received and are so generally useful as "*formalin.*" Its special power of penetration, and its greater powers as a preventative, preservative and germicide make its rationale at once convincing and self evident, while the advantages it possesses another antiseptic in cheapness, easy administration or use, by spray, powder and in solution, coupled with its well known superior form of penetrating the deeper tissues, even solid substances have already won for it a place in modern therapy as an antiseptic and disinfectant. Because of its therapeutic indications and its adoption by the profession we decided to give you an epitome of the agent itself with a brief resume of its clinical and sanitary indications. Formalin, itself is a 40 per cent. watery solution of "Formicaldehyde." There are other solutions, to wit:—a 60 per cent. solution in methyl alcohol introduced by Oppermaa called "halzin," also a 60 per cent. solution with menthol, by Rosenburg, called "halzinal." while weaker watery solutions have been used by different clinicians for local uses, and a 5 per cent. solution only being advocated for injections in gonorrhœa. A powder made by mixing formalin with gelatin, introduced by the Germans, called "glutol" has been used locally. The Americans following with a similar powder calling it more properly, "formalgelatin" Enternally it is used mixed with milk sugar, the preparation being called "sterisal." The 40 per cent. solution of formicaldehyde called formalin is the best of the solutions, the methylalcohol, menthol, &c., being added simply to render it a little less irritating. It is used as a solution on cotton, guaze and cloths, and very generally as a spray to wounds, fresh or infected and to pus cavities, while the solution, formalin, has been used freely in nearly all infectious and suppurative processes, to the womb as a wash or spray in cases of purulent endometritis, and in the vagina, to the cervix, on tampons, and as a wash. It is said to be absolutely nonpoisonous, while its power of penetrating the deeper tissues is beyond compare. This power of penetration specially indicating its use in infected wounds, suppurating tracts and cavities. Its power to penetrate the deeper, submucus tissues of the urethra where gonnoccocci resist ordinary remedies led to its use in this disease and accounts for its good effects. It is claimed that a solution 1 to 100,000 will prevent the development of bacteria while 1 to 75,000 is germicidal. It evaporates readily placed in suitable apparatus, in a closed room, disinfecting all objects therein, even solid food being found absolutely

free from germs after such exposure. It has been successfully used in whooping-cough, checking poroxysms and cutting short the disease, and in croup, common sore throat and diphtheria it has been found useful, even of decided benefit. At Guys hospital a bottle of formalin left unstopped in a room where there were some ring-worm culture, killed them all by morning, and the solution is now used there as a specific for that trouble. It is stated that 60 to 70 c.c. of a 2 per cent. solution will disinfect one square meter of a closed room in 24 hours. One method of disinfection of rooms used, is to dip rags or cloths in a 35 per cent. solution, made by adding 1 liter of a 2 per cent. solution to 500 grammes of chloride of lime; one cloth 2 meters square, suspended in a room 24 hours will suffice to disinfect 8 c. meters. It is specially adopted to disinfection of books, furs, rags, mails, &c., and will doubtless prove of considerable commercial value in the future. Formalin in not only antiseptic and disinfectant, but is a good preventative and preservative. As a preservative of urine for test examinations it is unequalled; preventing the deposit of uric acid and the amorphous urates or if already deposited it dissolves them. This solvent power has been put to clinical use in "utropia," which is an anine combination of formicaldehyde. This agent restores to normal condition and acid reaction alkaline and putrid urine, containing mucus in excess, pus or pus organisms, uric acid and amorphous urates. It is therefore a very valuable agent in all suppurative diseases of the urinary tract; in gouty and rheumatic conditions where an eliminant of uric acid is needed. It combines readily with salicylic acid forming a soluable, non-irritating, nontoxic compound. No doubt other combinations of equal merit will be found, while the special and superior powers of formalin as a preservative, antiseptic, disinfectant and germicide will serve to bring it into more general use. Its cheapness and availibility will ensure its universal adoption. It is void of odor, easy to manipulate and readily soluble. Possessing all these advantages it may supercede the older, orthodox carbolic acid, bichloride of mercury and iodoform, minus their odors and poisonous natures.

REMARKS UPON EFFECT OF BRILLIANT SURGICAL REPORTS BY EXPERT SURGEONS, &c.

The President of the American Medical Association, at its last meeting in Atlanta in '96, called the attention of the profession, in an able way, to the limitless sweep of the surgeon's knife, giving it out that the pendulum had swung too far to that side, that therapy was apt to be neglected and relegated to the background by the truly brilliant results of expert operators in different fields of surgery. His warnings were not aimed against the skilled surgeon in his proper and legitimate work, made an expert by long years of assiduous anatomical and experimental work and study of the science in its entirety, but against the rush of the young tyro and even of older practitioners, with a post graduate course or two, and an inborn love of the knife, into the field of gynæcological, or abdominal surgery, in their vanity seeking after a record of 100 consecutive cases without a death, or with a 3 per cent mortality.

His warnings, if they have not succeeded in establishing the true dead-level of surgical right and powers, has, no doubt, saved some lives from the ever trenchant blade. The thought leads us to state that while much good may have been done by this post trend and ambition on the part of the profession to operate successfully in the above fields, we have no doubt but that the publishing of such brilliant work; so many cases, with such small mortality rates, while saying nothing of labor expended to reach the expert stage, or of the mishaps, accidents, and real failures in prior work by these more eminent men has had the effect of stimulating this vaulting ambition. It seems to us that much good would come if the other side of surgery, its dangers, its failures and mishaps were published from time to time—that more good perhaps would come from an accurate account of a failure following an operation —explaining the defects, or sins of omission and commission that occurred in its attempt. The younger members would find more to perfect themselves upon and study up the details more clearly; ambition would follow more upon preparatory exercise and work, and less upon hasty, indiscriminate privilege and pursuit.

Surgery has made such rapid strides and skilled operators have had such brilliant successes, giving them so much greater renown than can be obtained in other lines of medical work, as to awaken desire and ambition upon the part of the younger surgeons, or men with a surgical feeling, causing their ambition to over leap their better judgment. However, it seems like it has been a true promethean flame with no color of wantonness in it. The best corrective is to show both the lights and shadows of surgical venture in order that the happy mean of selection and fitness may be reached or proone itself.

IMPORTANCE OF CERTAIN FRACTURE-- SYMPTOMS.

In making a diagnosis of fracture the surgeon is apt to rely mainly on the clas sical symptoms of preternatural mobility, unusual deformity and crepitus, but men of experience will recall many cases, and especially in fractures recurring near a joint, where all of these symptoms were absent, and this fact alone would have excluded the probability of fracture had not other symptoms came to the rescue.

If the surgeon makes firm sweeping pressure with the finger-ends near the affected spot, and should reach one sharply defined place where the patient suddenly winces and emphatically shows evidence of sharp pain; if there is decided loss of power of motion in the affected part, and if there occurs subcutaneous hemorrhage at or near said spot, it can be reliably stated that there is a fracture, even though none of the aforesaid classical symptoms be present.

The appearance of ecchymosis may be delayed for a day or two after the receipt of the injury, according to the depth of the over–lying tissues through which the blood must pass outwards towards the skin, and it is well to remember that this blood does not always appear under the skin immediately over-lying the seat of fracture, but will be found usually where the force of gravity and minimum resistance carries it.

In fractures of the tarsal, metatarsal, carpal and metacarpal bones, and of bones in close proximity to joints, these symptoms are of especial importance. If they occur with the first-named symptoms they become all the more strongly corroborative.

THE CONSERVATION OF THE PHYSIOLOGICAL CORRELATION OF FUNCTION IN THERAPEUSIS.

The physician and specially the busy general practitioner of today with the multiplicity of new therapeutic preparations or agents conveniently placed upon his office table and allured by their elegant forms, palatableness and ease of administration in accepting the dictions of their efficacy contained in the mass of literature sent along with them or influenced by the brilliant accounts of the agents introducing them is apt in their indiscriminate use in his practice to loose sight of the proper correlation of functions, physiologically natural in a healthy body, but which should be carefully conserved in attempts at restoration to health. He is apt too to overlook the incompatability, synergistic and antagonistic action of the remedies. We do not approve the present methods of the different pharmaceutical houses in their efforts to supply the profession with the newer therapeutic and medicinal agents as they are discovered from time to time, believing that they are doing a good work, and assured that the profession sufficiently appreciates their course, but we do object to the universal acceptance, and hasty, indiscriminate use of the newer hypnotics, antipyretics, antiseptics, &c., being rushed upon the market and so profusely supplied to the profession, at the expense of the older and tried, orthodox remedies.

We have seen how a new remedy gotten up and exploited by some leading light in the profession, or presented in flaming colors by some well known Pharmaceutical house will strike the popular fancy and sweep over the professional field like a praraie fire, consuming everything in its path. Like ourselves you remember the history of the coal tar series of antipyretics, how one after another they captured the profession and were indiscriminately applied to the reduction of temperature in large doses in all forms of diseases and ailments, and though their analgesic power to allay pain, headaches, back aches and neuralgia be-

came popular fads so to speak, until the profession had to hedge upon "smaller doses, more frequently repeated," and warning notes were sounded from various centers, and head lights of medicine. Their irrational use simply to reduce fever in some of the specific diseases without regard to the causal factors of the disease, or of the functional relations that were disturbed, and the frequent mishaps, the debility, and prolonged convalescences attributed to their indiscriminate use should put the profession upon its steel in regard to the adoption and clinical application of the mass of subtances now being presented.

We know that in disease there is a departure from normal functional activity, an excess or defect of the normal relations of one or more of the functions to others, a want of or disturbance of that correlation of function which holds the body at the normal.

Instances of correlative functional action are noted in the action of the hibitory and inhibitory nerves controlling the heart, in heat production and heat dissipation; in the anabolic-constructive, and kata-bolic or destructive changes always going on in the blood, and between the sensory and motor functional actions in all voluntary acts. The coal tar series all lessen temperature more or less, but does so at the expense of the anabolic or constructive changes of the blood, they are said too to interfere with and lessen the conversion of hæmoglobin into oxyhæmoglobin so necessary to proper oxygenation of the tissues. Their use in lobar pneumonia is therefore contraindicated. Some of them exert their influence directly upon the nerve centers perhaps already inflamed by the ptomains of infectious or germic diseases and their use therein must be irrational. In some forms of disease dimination of the hearts functional activity, where the hibitory influences are in abeyance, is a part of the natural recuperative process and we should not seek to augment or goad it into increased activity by cardiac excitants less exhaustion follow. To aid oxygeuation functions in lobar pneumonia or anæmia would be good therapy, but, it does so in a case of pulmonory tuberculosis would doubtless hasten a fatal result. Fever in disease is due to unbalanced functional activity—either to an excessive heat production, diminished heat loss or both and we should seek to conserve the correlation which would balance these processes. The symptoms of heat or exalted temperature can be more safely combatted by the application of cold while we can aid nature in restoring the altered correlations by nutritives, repose and constructives supplying the necessary energy to vital processes. It is being generally recognized too that, nature furnishes an antitoxin that often successfully combats the toxines ptomaines, &c., due to the presence of alien or disease germs in the blood- Biologic and chemical agents are being introduced that stimulate functional activity, enabling nature to conserve the vital forces at the maximum or an equilibrium. These forces and correlative functional activity of the organs are often least conserved by the antagonisitic action of remedies when one alone would not have the proper effect, as witnessed by the use of morphia and atropia, iron and chlorate of potash and calomel and soda. We are by no means opposed to therapeutic progress and can commend the methods pursued by our different pharmaceutical houses in their efforts to keep the medical profession supplied with new and up to date remedial agents, but we oppose their indiscriminate, irrational use, and because the general practitioner in the rush of work may loose sight of these factors which perhaps the discoverer himself of the new agent and the short time of experimental and clinical trial given the agent has not determined its influence. While influenza and typhoid have slain their thousands it may not be doubted that the abuse of new medicinal agents popularized by the dictions of medical leaders, prematurely given out, and popular craze have perhaps led to the slaying of tens of thousands.

BOOK REVIEWS.

A new Work on Manual Swedish Movements or Swedish Gymnastics. By. C. T. Hartelius. Modern Medicine Publishing Co., Battle Creek, Mich. Price $1.50.

Dr. Hartelius, the author of this work, was for many years director of the Central Institute of Stockholm, Sweden, the institute founded by Ling under the patronage of the Swedish government, and which has long been known as the headquarters

for training in this branch of therapeutics.

The growing Importance of Manual Swedish movements in various forms of chronic disease, and especially the great interest which has recently been developed in this country and Europe by the wonderful results obtained in the treatment of various forms of cardiac disease by Swedish movements as practised by the brothers Schoott, has caused a general interest in this subject. But until now there has not appeared in English any treatise which could be called authentic or authoritative. This work by Dr. Hartelius has long been used as a text book on the subject in the Central Institute in Stockholm, and as a hand-book by practitioners of the system in Sweden.

The work has been translated by A. B. Olsen, B. S., M. D., who, besides being familiar with the Scandinavian language, is also familiar with the subject itself. The work is edited by Dr. J. H. Kellogg, who enjoyed a personal acquaintance with the author, and studied the system with him in Sweden.

The work has been translated and published with the approval of Dr. Hartelius, who; shortly before his death, carefully revised the translation and gave it his hearty sanction. It contains 95 illustrations, which clearly show the exact position of every movement. The work also contains days' orders, or prescriptions, for all maladies to which this special systkm is adapted. It is substantially bound.

ANOMALIES AND CURIOSITIOE OF MEDICINE: Being an Encyclopedic Collection of Rare and Extraordinary Cases, and of the Most Striking Instances of Abnormality in All Branches of Medicine and Surgery, derived from an Exhaustive Research of Medical Literature from its Origin to the Present Day, Abstracted, Classified, Annotated, and Indexed. By GEORGE M. GOULD, A. M., M. D., and WALTER L. PYLE, A. M., M. D. Imperial Octavo, 968 pages, with 295 Illustrations in the Text, and 12 Half-tone and Colored Plates. Philadelphia: W. B. Saunders, 925 Walnut Street; 1897. Prices: Cloth, $6.00 net; Half Morocco, $7.00 net. Sold only by subscription.

Among the thousands of volumes that have been published within the past years it is a strange fact that there has never been any systematic gathering of Medical curosities. The present volume appears to be the first thorough attempt to classify and epitomize the literature of this nature. The authors have placed in the hands of the medical profession one of the most valuable works that has ever been published. Aside from its great value as a scientific work it is also one of the most interesting and enjoyable books that has been our pleasure to review. We would not convey the idea of finding enjoyment by scanning the frieks of nature, but by becoming more enlightened as to these realities. Since the time when man's mind first busied itself with subjects beyond his own self-preservation and the satisfaction of his bodily appetites the anomalous and curious have been of exceptional and persistent fascination to him and especially is this true of the human body. In reading this work one will become amused at the curious things here shown. Curiosities that you have heard of all your life will be found in this work with an appropriate and authenticated history. To show to some extent the magnitude of the work and the vast amount of energy and labor that the authors have given to its preparation, a general outline will be given; it is divided into the following chapters: Chapter I. Genetic anomalies; II, Prenatol anomalies; III, Obstetric anomalies; IV, Prolificity; V, Major Terata; VI, Minor Terata; VII anomalies of stature, size, and development; VIII. Longevity; IX, Physiologic and Functional anomalies; X, Surgical anomalies of Head and Neck; XI, Surgical anomalies of the extremities; XII Surgical anomalies of the thorax and abdomen; XIII, Surgical anomalies of the Genitourinary system: XIV, Miscellanious Surgical anomalies; XV, Anomalous Types and Instances of disease; XVI, Anomalous Skin diseases; XVII, Anomalous nervous and mental diseases; XVIII, Historic Epidemics. It may be safely said that this work contains more desirable information, more information entirely unheard of before, than any book lately printed. The thousands of cases contained in the book have been conveniently and satisfactorly arranged. It has a complete general index in which may be found not only the subjects under consideration and numerous case references, but also the names of the authors of the most important reports.

The book bears the same impress of

mechanical excellence and neatness characteristic of the publisher.

The Diseases of Infancy, and Childhood, for use of Students and Practitioners of Medicine. By L. Emmett Holt, A. M., M. D., Professor of Diseases of Children in the New York Polyclinic; Attending Physician to the Nursery and Child's and the Babies' Hospitals New York: Consulting Physician to the New York Infant Asylum, and to the Hospital for the Ruptured and Crippled. With Two Hundred Illustrations including Seven Colored plates. New York: D. Appleton & Co. 1897. Price $6.00.

This book is a work on pediatrics, and not on general medicine, a statement which cannot be made in strict truth of many alleged works on pediatrics. It marks another epoch in pediatric literature. There is probably no one better qualified for such a task than the author. A pathologist of great learning, a practitioner of large experience, and a hospital physician of unlimited experience gives him qualifications of an unusual character and he has produced a book of a very high scientific standard. This is not only a work of a scientific nature, but is also very practical. It is very rare that we find the two so nicely combined. This has however been characteristic of Dr. Holt. The writers ideas are clear cut and put in a definite style. In his statements he is very exact and accurate.

Every sentence in the book seems to be just the thing. The field of the work is well expressed in the authors own words: "The pathology and symptomology of disease in children who have passed their seventh or eighth year really differ very little from those of adolescents and young adults. It is in infancy and early childhood only that the peculiar conditions exist which separates pediatrics from general medicine, and entitled it to be ranked as a special department. It is therefore to the description of disease as it is seen in infants and young children that the book is chiefly devoted. In reading the pages it is clearly shown that the author has stuck to his text. There is one other line in the perface which expresses a vast amount—Infant hygine and infant feeding are the most important departments of pediatrics. The author seems to be so thoroughly imbued with these facts and with the fact that the well-being of the child and even of the adult, depends so largely upon its management during its first year, that his book is devoted to infancy to an unusual degree. The first chapter is devoted to the hygiene and general care of infants and young children. The second chapter on growth and development of the body. This chapter is very good. The third chapter contains 36 pages and considers the peculiarities of disease in children. The various peculiarities in symtomatology are considered in detail, particular attention being given to physical examination. While it would afford us great pleasure to give our readers a detailed account of every chapter but the magnitude of the work readily shows this to be impossible. Dr Holt has many warm friends in the South and his reputation as a private practitioner of large experience and a knowledge of the need of the general physician gained by years of successful post-graduate teaching will readily create a very large demand for his work. We cannot recommend it too highly. We congratulate the publishers upon the superb manner in which the mechanical work has been executed.

Bacteria of the Sputa and Cryptogamic Flora of the Mouth. By Filandro Vicentini, M. D. Translated by Rev. E. J. Stutter and Professor E. Saieghi. London: Bailliere, Tindall & Cox, 20-21 King William St., Strand. 1897.

There is no question but that great interest centres about the study of the micro-organism of the human mouth. This work will be of special interest to the botanist, bacteriologist, pathologist, and the dental surgeon, because the bacteria of the oval cavity offer a fertile field of investigation and present many questions, the solution of which has thus far been attempted in vain.

The book is divided into First, Second and Third Memoir, with a good appendix. The First Memoir contains 75 pages and is devoted exelusively to the sputa of Whooping Cough. This is a very fine portion of the book, and is well worth the small price.

The Second Memoir treats of Recent Bacteriological Researches on the sputa; The Morphology and Biology of the microbes of the mouth. Interesting sub divisions will be found under this section.

Third Memoir is a consideration on Leplothrix Vacemosa.

The book is handsomely illustrated when necessary to ilucidate the text. It is a nice volume full of useful information.

Principles or Guides for a Better Selection or Classification of Consumptives Amenable to High Altitude Treatment. By A. Edgar Tussey, M. D. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut St.

If the principles laid down in this little book are carefully and correctly applied will, in many instances, yield to the honest, conscientious inquirer for truth a rich harvest of results. It discusses and treats of the every day things that pertains to adding comfort and well being to a class of patients whose always sad condition has ever appealed to our deepest sympathy, and created a burning desire to give our best energies to the work of reducing, as far as possible, the untold number of victims which consumption has laid upon its altar of sacrifice. The first section is devoted to the High Altitude Treatment of Consumption. In the section on Home Climate the author clearly emphasizes the fact that any climate in which a person has been born and spent thirty, twenty, or even ten years of his life, which immediately preceded his illness, has advantages for him possessed by no other which is not exactly similar to it. This little work contains 151 pages of the most valuable reading matter. It is nicely published.

Under Both Flags. A Panorama of the Great Civil War. Written by Celebrities of Both Side; the Men and Women who Created the Greatest Epoch of our Nation's History. 1896. Veteran Publishing Co.

It has afforded us much pleasure to scan the pages of this book. It probably comes the nearest of giving an accurate account of the late war than any we have read. There are, among many others, two characteristics worthy of special mention; that every article contained in it was written, or the matter furnished, by the living actors and witnesses of the events related, and that in no other form can these historical treasures be obtained; that the truth only, without bitterness and malice, finds place upon its pages; that no word or expression is used that could not with propriety be used by a Northern or a Southern Veteran, or to the children of either. It is truly a Panorama of the Great Civil War as represented in story, anecdote, adventure, and the Romance of Reality. The book contains 597 pages. Energetic workers are finding profitable employment in the sale of this book. For terms address Monarch Book Company, Chicago, Ill.

Transactions of the Texas State Medical Association, Twenty-Eighth Annual Session. held at Fort Worth, Texas. 1896.

Scarcely do we find as nice a lot of papers read before any Society as those found in these transactions. They are particularly fine selections. Dr. H. A. West, of Galveston, is the Secretary. They are neatly and clearly printed, and we can find but one objection to them, the same objection existing in North Carolina, they should be more substantially bound.

LITERARY NOTES.

Appletons' Popular Science Monthly for January, 1897.—The January number of Appletons' Popular Science Monthly presents a wide range of topics nearly all of which are of general interest. David A. Wells reaches some very practical matters in this month's installment of his Principles of Taxation, among which are the true meaning of a revenue tax and the rightfulness of using the tax-power to protect weak industries or enforce morality. An Object Lesson in Social Reform, showing the application of Spencer's philosophy in the building of bicycle paths, is presented by Franklin Smith. Prof. D. T. Macdougal concludes his account of Botanic Gardens with a fully illustrated description of Tübingen and its botanists. A statement of Our Present Knowledge of the Antarctic Regions, with a map, is contributed by Prof. Angelo Heilprin. There are two hygienic articles, one on Consumption and Consumptives, by William L. Russell M. D., discussing the most recently proposed precautions against communication of the disease, and the other on Disinfection at Quarantine, by M. E. Ward, describing the floating disinfecting plant used in the harbor of New York, with illustrations. Psychology is represented by Dr. William Hirsch's article on The Psychology of Genius, and a paper on The Popular Æsthetics of Color, in which Prof.

Joseph Jastrow summarizes the preferences expressed by forty-five hundred persons at the Chicago World's Fair. There is also a study in Race Psychology, by Anna Tolman Smith. M. G. Renaud writes on the Evolution of the Carrier Pigeon, and there is a batch of entertaining descriptive articles, including Spiders and their Ways; illustrated; Petroleum, Asphalt, and Bitumen. A Curious Canadian Iron Mine; and affections and Jealousies of Lizards. There is a biographical Sketch of the late assistant secretary of the Smithsonian Institution, Dr. George Brown Goode, with a Portrait. In the Editor's Table Anxious Orthodoxy and Growing Illiteracy, or rather growing neglect of the mother tongue, are discussed. The other departments are well filled with minor items.

New York: D. Appleton & Company. Fifty cents a number, $5 a year.

The Living Age has never needed any "New Features" to commend it to the best class of readers, yet it must be conceded that the additions recently made are real improvements.

Without yielding a particle of its old conservatism, adhering as strictly as ever to its purpose to admit nothing but the choicest selections to its columns, it has shown a wise judgment in entering new fields, thus extending its scope and increasing its usefulness.

Late issues of this eclectic have been enriched by many valuable productions, selected not from the British press alone, but embracing translations from leading Continental authorities, including Emilio Castelar in a review of the Spanish-Cuban relations, a paper on de Goncourt, and a discussion of "Political Ideals and Realities in Spain;" Jules Lemaitre on a "Modern Morality;" Alfred Fouille in "As Others See Us," and Anatole le Braz in "All Souls' Eve in Lower Brittany."

In fiction may be mentioned a serial by the eminent Russian novelist, Ivan Tourgenieff, and a short story from the Norwegian of Alexander L. Kielland.

Besides these translations, made expressly for The Living Age, the numbers contain the usual rich and varied selections from the British periodicals, full of interest and worthy of permanent preservation, such as "Young Turkey," by Karl Blind; "The Progress of Mankind," by Elisee Reclus; "Robert Louis Stevenson," by Lord Rosebery; "The House of Lords as a Court of Appeal," by Michael McDonagh; "The Political New Year," by E. J. Dillon; and "Some Recollections of Carlyle's Talk," by William Black.

In addition to all this is a Monthly Supplement containing Selections from American Magazines, Readings from New Books, and a List of the Books of the Month. Published by The Living Age Co., Boston.

The complete novel in the February issue of Lippincott's is "Under the Pacific," by Clarence Herbert New. It takes the reader to a part of the world he probably never heard of before, where two extremely enterprising Americans conduct a search for long-lost treasure under the most unsual circumstances.

The two "Old Friends" of whom Edith Brower writes were far apart in age, and one of them was musical; in fact, music and friendship are the key-notes of the tale.

"Old Tom of Nantucket," celebrated by Joseph A. Altsheler, was an old man-o'-war's-man in the hands of Algerine pirates, on whom he played a judicious and most Christian trick. M. S. Paden, in "A Forestry idyl," gives a reminiscence of the great Chicago Fair.

"South Florida since the Freeze" is another of R. G. Robinson's eminently fair-minded and instructive articles. Albert G. Evans handles a topic of vital importance to our great West, "Irrigation." Frances Albert Doughty writes on "The Southern Side of the Industrial Question."

Emily Baily Stone supplies a second amusing paper on "Marying in the Fifteenth Century. "A Vanished Civilization"—that of the Jesuits in South America—is described by Henry Granville.

"The Dignity and Humor of Signs" are discussed by Agnes Carr Sage, and "Gloves" by Elizabeth Ferguson Seat. Dr. Charles C. Abbott has a quaint essay on "Overdoing the Past."

The poetry of the number is by Jean Wright, Julian Hawthorne, Charles G. D. Roberts, Clarence Urmy, and Clinton Scollard.

The Atlantic Monthly for February, 1897.—Democratic Tendencies. The first of a series of notable articles. The difference between ancient democracies and modern, and an explanation of the greatest dangers and gravest problems of the present; plutocracy; the giving of offices as a reward. E. L. Godkin, Editor of The Nation (N. Y.).

The Peabody Education Fund. The results of one of the most wisely bestowed benefactions in human history; its benefits to be continued. President D. C. Gilman, Johns Hopkins University.

The Story of an Untold Love. VIII.-X. Paul Leicester Ford, author of the Hon. Peter Stirling.

A Study of American Liquor Laws. The results of the investigation by the Committee of Fifty of the effects of liquor laws in Maine, Iowa, South Carolina, Massachusetts, and four other States. President C. W. Eliot, of Harvard University.

The Juggler. V. Charles Egbert Craddock.

My Sixty Days in Greece. The visit of the great American Hellenist to Athens; the new and the old Olympic games; the spirit of the antique world. Professor B. L. Gildersleeve, Johns Hopkins University.

Emerson Sixty Years After. II. The conditions that produced the group of ante-bellum writers; wherein Emerson was the greatest; his defects. John Jay Chapman.

Village Improvement Societies. The revelation that these organizations are working in the external beauty of villages and towns; typical instances. Mary Caroline Robbins, author of "The Rescue of an Old Place."

Cheerful Yesterdays—The Rearing of a Reformer. Reminiscences of the religious fermenting time in New England. Thomas Wentworth Higginson.

An Example of Monumental Art. The new decorations in the Boston Public Library. Cecilia Waern.

Two Interpreters of National Architecture. Bulfinch, the artitect of the last century, and Charles Welborn Root, the artitect of the World's Fair. Henry Van Brunt, of Kansas City, Mo.

Reviews; Comments on New Books; Contributors' Club. Boston and New York, Houghton, Mifflin & Co.

Are Our Criminals Generally of Irish-American Parentage?—Mr. Josiah Flynt, in the February Forum, says: Concerning the nationalities of criminals I have met, I must say that most of them are indigenous to the countries in which they live. In this country it is often said that foreigners are the main offenders, and a great deal has been written about Europe dumping its criminal population on American shores; but the main offenders, in the open at least, are natives, and are generally of Irish-American parentage. Indeed, in America, it is considered something quite out of the ordinary if the criminal cannot attach himself somehow or other to the "Emerald Isle;" and nothing has hindered me more in my intercourse with him than the fact that my own connection with it is very slight.

Senator David B. Hill has written an able paper for the February number of The Forum on the "Future of the Democratic Organization."

The public seems never to grow weary of hearing about Rudyard Kipling and his achievements, though much of what is said in print about him is sorry stuff indeed. It is refreshing to find in the February Review of Reviews a candid and unpretentious, but not the less exhaustive, critique of Kipling which really does justice to the author's personality without "gush" and without the senseless exaggeration so common in articles of this kind. The writer, Mr. Charles D. Lanier, has given us an interpretation of Kipling which is frankly sympathetic and at the same time irresistibly attractive.

Imperial Granum.

Syracuse, N. Y., Dec. 11th, 1896.
John Carle & Sons, New York City.

Sirs:—During the middle of November I had an attack of pneumonia with very great difficulty in digesting my food; on trial of the various foods of which I had an abundance of samples, I found none so palatable and easily digested as Imperial Granum.

Truly yours.
————M. D.

A Contribution to the Study of Amœbic Dysentery.

At the Annual Meeting of the New York State Medical Society, held in Albany, January 26th, 27th, 28th, 1897, Dr. Charles E. Lockwood of New York read a paper entitled "A Contribution to the Study of Amœbic Dysentery."

He said, "We are realizing more and more every day that the study of the role played by the lower organisms in the production of diseased conditions is most important as looking towards the proper diagnosis and treatment of many diseases to which our flesh is heir, and it is with this conviction that I am led to contribute my experience in the diagnosis and treatment of Amœbic Dysentery."

The Doctor first described the Amœba as a genus of Protozoa, belonging to the order Amboeboea, class ehizopoda, the members of which consist of but slightly differentiated masses of protoplasm characterized by a constant change in form (Amœboid movement). Amœba Coli was discovered by Lösch in great numbers in the dejections and on the mucous membrane of the large intestine of a man affected with dysenteric symptoms. It is 20 to 35 m. in diameter, rounded or pear shaped, and possesses a few broad pseudopodir, a nuclous and a few vacuoles.

The Doctor then referred to the investigations of Drs. Wm. T. Councilman and Lafleur, at the John Hopkins Hospital in Baltimore; also to reports of cases by Kartulis, Hlava, Masiutin, Pfeiffer, Osler, Musser, Stengel, Dock, Cohen, Illoway, and Edebohls.

He exhibited a drawing showing the Amœba in a case which came under his observation. It seems probable that drinking water is one, if not the chief source of infection.

He gave the conclusions of Drs. Councilman and Laflour, who said:

1st. That Amœbic Dysentery should be regarded as a distinct disease.

2nd. That the Amœba had been shown to be the causative agent from its constant presence in the stools and in the anatomical lesions and from the inoculation experiments of Kartulis, and that the disease is characterized by variable onset, of which the special features are periods of intermission alternating with exacerbations, a marked tendency to chronicity and anæmia.

3rd. That abscess of the liver and involvement of the lung are frequent com plications.

4th. That the disease is widely distributed and found in most parts of Europe and the United States, and in the tropics everywhere.

The case reported by the Doctor was in a young man, 32 years of ago, who had been under the care of two other physicians for eleven days, and experienced no relief. An examination of the stools showed the Amœba, and the following treatment was prescribed:

As a diet, one quart of peptonized milk and the whites of six eggs, with a little salt water daily. The use of rectal injection of the bi-sulphate of quinine in the strength of 1 to 5,000, 1 to 3,000, 1 to 2,500, 1 to 1,500, in three to four pints of water at the temperature of 100 degrees Fahronheit, three or four times a day, preceding their administration by the insertion of a suppository, containing one grain of opium a half hour before each rectal douch, and to give by the mouth two grains of quinine every three or four hours, and a capsule containg fifteen to thirty minims of castor oil and two and a half grains of salol, six to eight times a day for cleansing and antiseptic purposes, and one grain of opium every four hours.

The injections were given with a hard rubber funnel and rubber tubing, connecting with rubber rectal tube; hips were elevated and injection given slowly. This treatment was given for five days, commencing with solution of quinine 1 to 5,000, and continuing that three times a day for two days and then using the higher strengths on the third, fourth, and fifth days, when microscopic examination showed that the Amœbae were present in the general mass of the feces only in very small number, and that they were less active. No more injections were given and three days afterward microscopic examination showed normal stools free from Amœbae and the patient was pronounced well.

Dr. Lockwood insisted on the importance of the differentiation of this form of dysentery from the other forms, and the importance of the microscopical examina-

tion of the feces in all cases of obstinate diarrhœa marked by remission, exacerbation, chronicity, and Anæmia, associated with discharge, of mucous and blood, and in some cases no rise of temperature, and the marked efficiency of rectal douches of bi-sulphate of quinine in destroying the Amœa, sufficing for a cure in this case in five days, and the necessity of an early diagnosis and treatment to prevent abscess of the liver.

Optometry.*

Optometry is the art of determining what is the optical power of the eye. Its usual application is to ascertain what lenses human eyes require, in order to perform their functions most satisfactorily. It is not a merely mathematical, nor yet an empirical, art. Its proper practice demands, on the part of the practitioner, a considerable degree of knowledge (and the *use* of that knowledge) of coular physiology and pathology. A proportion of our race never wear better glasses than they are able to obtain by "trying on," at a dealer's counter. Whether this methon of selection really conduces to the greatest good of the greatest number, the present discussion does not undertake to decide. But merely subjeetive optometry (even when practiced, as it too often is, by those who are entitled to write "M. D." after their names) bears about the same relation to a proper optometric examination that the bare perception of a pulse-beat does to a careful examination of the heart.

Glaucoma often makes a certain lens' effect, on the affected eye, seem most gratifying; if that lens be used, as a remedy for the patient's annoyance, and no further remedy be sought, it may be the factor in temporization to which is due the later total loss of vision and even of the eye itself. Of optic neuritis the same is true, except as to the loss of the eye-ball.

In the hands of a skillful practitioner, ophthalmoscopy is one of the most effective optometric methods. Unfortunately, many think they can practice it, who, if they would apply adequate tests, would discover their inability. The irregular course of the vessels of the fundus constitutes one of the greatest hindrances to its use, for very fine results.

Skiascopy probably leads its class, as an exact method of optometry. But cycloplegia is essential to the complete success of even skiascopy. The ophthalmometer of Javal-Schiotz is very useful, but is only a restricted agent in examination; the meridian of greatest or least curvature of the cornea is, in only two-thirds of cases, the proper inclination of the axis of the cylinder to be worn.

Subjecttve optametry is very useful, in its proper place, especially confirmatively, but, by itself, it is one of the least trustworthy methods.

*Abstract of a paper read before the New York Medical Society, January, 1897 by C. M. Colver, M. D,

Gauze Drainage in Surgical Gynecology.

At the annual meeting of the Medical Society of the State of New York, held in Albany, January 26th to 28th, 1897, Dr. Willis E. Ford, of Utica, presented a paper entitled "Gauze Drainage in Surgical Gynecology."

Dr. Ford advocated the use of sterilized and medicated gauze for the purpose of drainage in a number of operations upon the female pelvic organs, claiming that the gauze acts like multiple capillary tubes, bringing away the serum that would otherwise separate the tissues while the oozing is at its most active stage. For this purpose it was especially indicated within cavities where complete apposition could not be secured, or where extensive surfaces are left to ooze.

The danger of alarming and even fatal symptoms developing after the use of considerable quantities of gauze highly impregnated with iodoform or bichloride of mercury, was pointed out, and gauze containing a less percentage of these drugs than is usually found in that purchased of dealers was advised.

In speaking of the use of the gauze tampon withing the cavity of the uterus after curettement, he stated that there could be no doubt but that carefully packing the uterus with gauze tape after such a proceeure for chronic metritis, aids materially in bringing about the involution of the organ which is one of the chief objects sought. It should never be tightly

packed however, unless the cavity is aseptic and likely to remain so, because of no drainage of pus into it, and the whole question, therefore, hinged upon the diagnosis which ought to be carefully made in all cases. In his own experience he had found that at the end of forty-eight hours a portion of the gauze should be removed from the uterine cavity by drawing down the end of the tape used, thus securing free drainage of the uterus and avoiding any danger of the gauze becoming wedged in the cervical canal as the uterus contracts. If this is carefully done, there can be no argument against the use of the gauze.

Dr. Ford also spoke of the use of gauze drainage in abdominal operations where pus has escaped into the cavity of the pelvis during the removal of diseased tissue, and advised that in cases where the intestines had been carefully protected by sponges so that the pus had not been freely admitted among them, that the cavity be wiped dry and tamponed with two per cent. iodoform gauze, without irrigation, allowing the probably infected tissues to rest against the column of gauze, the end of which should be brought up out of the abdominal wound. If the gauze be folded backward and forward when it is first applied, its removal is comparatively easy and the danger of hernia slight.

The use of acetanilid gauze was advised in the hopeless cases of inoperable cancer where rigid antisepsis is required to make the lives of these patients tolerable. After curetting such a cavity, irrigating and applying chloride of zinc, he was accustomed to use gauze saturated in acetanilid solution, and had found that both pain and fetor had been materially lessened, the acetanilid also acting well as a styptic.

The points emphasized in the paper were these:

This form of drainage has almost entirely taken the place of other means.

The utility of this method does not depend upon the drugs with which the gauze is charged.

Most of the gauze in the market is too strong with antiseptic drugs.

Gauze drainage does not make a septic operation or an imperfect one safe.

The criticism against the use of the gauze tampon after curetting a uterus, cannot be made in cases where the gauze is properly used.

Dr. George M. Gould seeks an expression of opinion from the members of the profession upon the recent action of Messrs. Wm. Wood & Co. in refusing to permit the editors of the "American Year Book of Medicine and Surgery" to publish therein abstracts of medical progress from articles and illustrations previously printed in the "Medical Record" and the "American Journal of Obstetrics. He claims:

1st. That it prevents the proper dissemination of medical knowledge and is thereby discourteous and unjust to the profession, and an injury to medical science.

2d. That the lay publishers reap a financial benefit from the publication of such contributions which the individual journals have no hope of reaping, and that this benefit is had at the expense of contributors.

3d. That no other lay publishers have ever objected to reproductions of quotations, abstracts and illustrations from their regular published journals, and finally asks if the profession desires that the publication of its contributions to medical literature and science should suffer such exclusion, and also whether the contributions are the property of the profession or not, claiming them to be more in the nature of a temporary loan.

We are not prepared to give the legal aspects of such a controversy. The lay publishers having the exclusive right of publication of any stated book or medical work, may have the right to exclude therefrom all such matter as does not come within the perview of their conception of its proper material, but, like Dr. Gould, we feel that when a publishing company, proposing to give the profession a specific work, claiming to embrace in abstract and in condensed form the very latest ideas, methods and theories of treatment for the mastery of disease, refuses to permit the insertion therein of quotations, abstracts or illustrations from any regular source, previously accounted standard, up to date and of value, then such company not only is discourteous ethically, and works injury to science, but is guilty of false pretences. A Year Book of Treatment should contain the kernals of all therapeutic nuts

cracked during the year, and even one omission of valuable data stamps the work as unfaithful, incomplete and inaccurate. Dr. Gould omits one point of information we would like to have, viz.: Why are the two journals named specially boycotted, and is it a boycot? Do they accept abstracts from articles published in all other or any other journals? If a boycot then we say that Messrs. Wm. Wood & Co. are decidedly at fault, for no publishing house or firm should allow personal pique to interfere with the best interests of its patrons, its regular readers.

That their course prevents the greater dissemination of medical knowledge all will admit, and any such discrimination is, therefore, unjust to the profession, and retards the advance of medical science that much. The physician, medical man who writes ably receives less financial reward than any other class of writers and their noble efforts to benefit mankind by their contributions should not be outlawed in mediums of general escape. The action is certainly without fair precedent, and we are at a loss to get at the essence of their objection, not having seen their explanation, and Dr. Gould not giving it. We are not posted as to the property rights of an article, but it seems to us that when an article is given to a journal for publication, this being the only consideration named, and it is set up or becomes printed matter, it is then the property of that journal; it becomes a part and parcel of his stock in trade, which he sells to his subscribers. Some general law, it seems to us, should be passed defining the rights of author and publisher of an article—if there is not already a law covering such rights. Authors should stipulate the conditions upon which their articles are presented through the medical press, or the lay publishers houses. A code of ethical rules should be formulated as they are interdependant. The best interest of both would thus be conserved, and much good result to the advancement of medical literature and science.

R. H. Hayes, M. D.,
Union Springs, Ala.

The Fitting of Glasses.

At the 91st annual meeting of the Medical Society of the State of New York, held at Albany, Jan. 26th, 27th and 28th, Dr. M. L. Foster, of New York City, read a paper with the above title.

Many physicians who are engaged in general practice may be found who have attended short courses of study in eye diseases, have invested in a variety of instruments, but have become discouraged by repeated failures and abandoned all attempts to treat diseases of this organ. These failures the writer attributes to improper preparation and insufficient study. The diagnosis and treatment of pathological cases would seem to him the part of the specialty which would be preferred by the general practitioner, as the diseases of the eye bear for the most part a close resemblance to those met with in other parts of the body, but he states that most of the physicians who apply to him for instruction appear to be actuated by a desire to devote themselves to the study of refraction, or the fitting of glasses. This he claims is not a purely mechanical art, like the fitting of shoes or gloves. Physiological elements enter into the problems which modify the results of mathematical calculations.

Dr. Foster recommends that before he commences this study the student should review the anatomy and physiology of the eye as well as the subject of optics in some book on Physics, but should not read any book on Diseases of the Eye until he has chosen his teacher, and should then follow that teacher's advice in regard to the choice of text books. He also deprecates the very common habit of wandering from one teacher to another before a sufficient mastery of the subject has been attained to render such a course profitable.

A practical suggestion to enable the physician to obtain the proper distance for testing eyes in a small office is to use a mirror and reversed types for this purpose. The use of the ophthalmometer is favored for the determiuation of the astymatism, particularly in the case of physicians who are not in the constant practice of this specialty, as the requisite skill in its use is more easily acquired and more readily retained than the corresponding skill in the use of the retinoscope. By means of this instrument and of the ophthalmoscope the form of refractive error which is the greater preponderance in a certain patient is determined, and this is to be corrected first, whether astigmatism

or not, for astigmatism is not in all cases of the greater importance.

Convex glasses should almost always be tried first, commencing with a lens much weaker than that indicated by the objective tests and increasing the strength of the lenses gradually, so as not to excite the ciliary muscle.

The use of a mydriatic he considers to be seldom needed except in children and to verify results previously obtained.

In regard to the examination of the motility of the eyes, Dr. Foster claims that the function of binocular single vision is so essential that its temporary abolition by means of prisms or rods seriously interferes with the action of the extrinsic muscles, and, therefore, with the examination. He also disagrees with the view commonly accepted that the effect of a prism placed over one eye is divided between the corresponding muscles of the two eyes, and holds that it affects the muscles of the eye over which it is placed, and that alone as long as binocular single vision is maintained.

Some Unusual Causes of Cough.

At the ninety-first meeting of the New York State Medical Society, Dr. Emil Mayer, of New York, read a paper entitled "Some Unusual Causes of Cough."

The Doctor laid particular stress on the fact that he wished to call attention to the fact that cough may and does exist without any pulmonary complication, a fact which is often lost sight of by the practitioner.

After mentioning the literature of the subject, Dr. Mayer presented seven cases as noted by himself. Case 1. Cough due to adenoids with hypertrophied tonsils. Case 2. Cough due to Follicular Pharyngitis. Case 3. Cough due to adenoids with Follicular Pharyngitis. Case 4. Cough due to Follicular Pharyngitis. Case 5. Cough due to Leptothrix Pharyngealis. Case 7. Cough due to foreign body in the ear.

Regarding the symptoms of this condition, it was claimed that they are so very apparent that it may be generally stated that a persistent dry and hollow cough without the usual antecedents of acute trouble, failing to yield to treatment in a reasonable space of time, and where, moreover, the physical signs failed to disclose any pulmonary complications, is without doubt reflex in origin and a search for the cause must be thorough and persistent.

Regarding the treatment, all cases were treated in the usual manner, excepting those of Follicular Pharyngitis, which the author treats in the manner heretofore originally described by himself, that of curetting. The galvanic cautery is never used for this class of cases by him, and one case cited shows that the cure by means of the curette was prompt and lasting. The case of Leptothrix was treated by means of expression, followed by applications of Balsam Peru. in alcohol.

The following were the conclusions arrived at. A cough is reflex in its origin:

1. When it is spasmodic, practically constant, without expectoration and temperature.

2. When the physical signs of pulmonary disease are absent.

3. When it persistently resists all medication.

4. When the general health remains comparatively undisturbed, and

5. When upon removal of the cause, it promptly ceases.

Some Cases in Suggestive Therapeutics

A paper was read before the State Medical Society of New York, at its late meeting, by Dr. H. S. Drayton, of New York City, with the title, "Some Cases in Suggestive Therapeutics" (Hypnotism).

These cases represented important diseases like epilepsy, cerebral meningitis, hystero-spinal myalgia, rheumatism, insane delusion, insomnia, etc.—all of long standing—and which, under other treatment, had shown no tendency toward decided improvement.

One case of special interest was that of a Boston lady who had been for fifteen years suffering with a sub-meningeal inflammation affecting the brain. She had almost lost the sight of both eyes, and at the time of applying to Dr. Drayton could only obtain relief from pain by using anodynes or powerful hypnotics. In the opinion of eminent specialists, whom she had consulted, her case presented symptoms that rendered it practically incurable. After eight sittings with hypnosis

induced her distress had become so greatly relieved so that she could sleep in comparative comfort for several hours at a time, and her general condition was markedly improved. The line of treatment indicated by the suggestions given during hypnosis was carefully followed later, and at the end of a year the lady declared herself well, aside from a defect of vision due to retinal degeneration.

Several cases of epilepsy had been treated by the suggestive method. All improved, while a good percentage made practical recoveries.

A case of melancholia was noted in the paper, the chief expression of which was a profound fear of being alone, and a great antipathy to going out of doors. This patient was controlled in the course of five sittings to the extent of his going out to walk alone in the streets of New York, and later made an extensive tour in Europe.

Another case, in the borderland of insanity, the family history being unusually remarkable for the number of mental lapses that darkened its record, seemed at first most discouraging, but in time effects were developed in control of will and regularity of conduct that proved most happy.

Dr. Drayton does not parade this mode of treatment as a panacea, by any means, but urges its use under judicious and intelligent management as an aid to other therapeutics, believing that many forms or conditions of disease that have not proved amenable to the treatment of physicians will yield to suggestions made in hypnosis, if that condition can be obtained.

Acute Myelitis.

Dr. Trevelyan on December the 9th before the Manchester Pathological Society read a paper on Acute Myelitis. He first referred to the disease which should be included under this heading and to the relationships of disseminated sclerosis and amyotrophic lateral sclerosis. The paper was based on two cases of disseminated myelitis, one of transverse myelitis, one of infantile paralysis, and one of traumatic meningomyelitis. Sections from three dogs' cords with acute spontaneous myelitis were also shown; in one dog the disease had only lasted five days and in the other the sequel of distemper, chorea, and paralysis had been observed. In one of the last named cases there was abundant and widespread perivascular infiltration and in the other equally widespread minute hæmorrhages. One of these cords had been satisfactorily hardened in formal (Müller) at 35°C. in two days. The morbid changes in acute myelitis were briefly discussed, especially those in and about the vessels. In respect to etiology, the limitation of the disease in some cases to certain definite vascular areas, the vascular and perivascular changes showing the route by which the irritant arrived, the experimental myelites especially of French observers, and, finally, the known clinical connexion between acute meylitis and the infective processes, supported the infective theory of the origin of this disease.

The Therapeutic Action of Orphol (Betanaphtol-Bismuth.)*

Intestinal ulcerations, occassioned by the breaking down of cheesily degenerated follicles are of not infrequent occurrence during the progress of pulmonary tuberculosis, and, as is well known, are found most often in the ileum. Thence the disease spreads to the colon and even to the vermiform appendix. The number of the follicles affected varies in different cases, sometimes the gut is fairly sown with them over a large extent of its surface, and sometimes the malady is limited to a small region. Then the cheesy central mass softens and is extruded, a follicular ulcer is formed, whose tubercular nature is shown by the presence of granulating connective tissue containing miliary tubercles in the neighborhood. The central necrosis progresses, and the ulcer extends, whilst connective tissue new growth and tubercle formation advances at the margins, and thus the follicular lesions soon develop into tubercular ulcers. Especially noticable among the symptoms that they cause to the obstinate and violent diarrhœa more especially when the ulcers are situated in the rectum or low colon. Irritation of the intestine of any kind almost always cause increased frequency of defecation.

*Translated from "The Allg. Med. Central-Zeitung," 1896, No. 96. By Coliner of Erfurt.

The thinness of these stools is accounted for, according to Nothnagel (Zur Klinik der Darmkrankheiten, 1881) partly by the pathological secretion from the ulcerated surfaces, and partly by the lessened power of resorption of the diseased intestinal wall, in consequence of which the feces are less solid than usual. When in the course of a consumption there appears an obstinate diarrhœa perhaps mixed with blood and accompanied by colicky pains, it is extremely probable that intestinal ulceration is present. If peritonitis symptoms appear, then the ulcerations are approaching the serous membranes, or they have already perforated the wall of the gut.

Our attemps to influence the diarrhœa of consumptives by intestinal antisepsis have lately been given a rational basis by Chaumier of Tours, who has called renewed attention to the importance of these therapeutic measures. Daily experience teaches us that astringents, like opium and tannin, have no healing influence on tubercular intestinal ulcerations. What is required in a reliable intestinal antiseptic that shall have at the same time astringent properties; thus lessening the evil effects of the micro-organisms and their products, and making the mucous membrane and a bad culture ground for them. The lessening of the secretion also reduces to a minimum the nutrient materials obtainable by the microbes. Orphol or Betanaphtol-Bismuth is such a drug. It is a light-brown powder, prepared by the chemical factory of von Heyden at Radebeul, and, though composed of oxide of bismuth and naphtol, has neither the repulsive smell nor the burning taste of the latter drug. It has an agreeable, faintly aromatic taste and smell and contains 20 per cent. of betanaphtol and 80 per cent. of bismuth oxide. It thus combines an active antiseptic with a powerful astringent agent. And since in most cases of chronic intestinal catarrh abnormal fermentation and decomposition plays a great part, the disinfection of the alimentary canal is an important therapeutic indication. The flatus and distension of the abdomen, the colicky pains, the abnomal abdominal sensations; all these symptoms are due to the activity of the micro-organisms in the intestine. I had occasion sometime ago to try Orphol in a series of cases of lung disease that suffered from chronic intestinal catarrh. The result was an entirely good one. The stools became formed and regular, and the troublesome symptoms above mentioned disappeared. I sellect the following case from the series:

A phthisical patient 52 years old had complained for sometime of flatus, abdominal pains, and persistent diarrhœa. The number of thin stools varied from 4 to 10 daily, with occasional attacks of colic. Although the patient had remained in bed for weeks, and had taken opiates, the troublesome diarrhœa persisted. He was emaciated and anæmic, and the meteorism was marked though there was no especial sensitiveness to pressure. The stools were almost watery, dirty-brown in color, foul of odor, and were plentifully mixed with mucous, with occasional streaks of blood. I was evidently dealing with chronic enteritis and ulceration of the intestinal mucosa. I put him on a bland diet, and gave him 1.0 (15 grains) or Orphol after eating, and as this was repeated every two hours, he took 5 gm. (75 grains) daily. The result was a favorable one, the borborigmi eructations, and pain were relieved, and three days later constipation set in. The appetite, formerly very bad, improved, and the patient began to gain in weight. Later his bowels moved once a day and the stools were of the consistency of thick gruel.

Orphol influences the mucous membrane of the digestive tract in two ways. In the first place it is a disinfectant, hindering the development of the bacteria. It is also an astringent to the mucosa, in virtue of the bismuth that it contains. It is worthy of notice, also, that Orphol does not, like opium and tannin, in any way interfere with the stomach, so that even patients suffering with dyspepsia bear it very well. To Chaumier is due our first knowledge of its antiseptic and astringent properties (comp. E. Chaumier, de l'emploi de l' Orphol dans l'antiseptic intestinale, Tours, 1896); and he explained the theory of its pharmacodynamic action. He showed that Betanaphtol-Bismuth was decomposed in the intestinal canal into naphtol and bismuth, the first being antiseptic and the last astringent. A small portion of the naphtol is ex-

creted in the urine; the rest passes out with the feces.

The new intestinal antiseptic is worthy of the attention of the practitioner.

An Unusual Manifestation of Acute Rheumatism.

Dr. Eugene Beach (New York State Medical Society) reports the following case:

Mr. X. a lawyer, aged 49 years, says he never felt in better health than on a fine autumn day when he went to visit his mother residing on a farm in the country. On retiring he thought he observed that the bed in which he was to pass the night seemed damp, and in the morning he was sure that the carpet on the floor appeared damp to his bare feet. He awoke in the morning with a considerable fever and a general aching which was pronounced in the testicles which were swollen and tender. His mother diagnosed the case as a cold and treated him accordingly with domestic remedies. After three days he was so much improved as to be able to return to his home, but the testicles remained swollen and tender, so that the jolting of the carriage in which he rode a part of the way caused him considerable pain. After treating himself for two days unsuccessfully he called this writer, who found an orchitis limited mostly to the right side, the testicle being considerably swollen and exceedingly tender. At this time there was but little fever or constitutional disturbance. After a few days, although not well he was able to get about, wearing a suspensory bag. About two weeks later the orchitis not having entirely disappeared, this patient experienced pain in both legs on the outer side, most intense in the region of the trochanters and extending downward, which at the time was regarded as a sciatica. After another interval of two weeds a cystitis of mild type, which in a few days was accompanied by a slight urethritis, manifested itself. This was followed in a few days by an exacerbation of the inflammation in the testicle which after five days gave way to a pronounced attack of acute articular rheumatism. This continued with considerable intensity for a period of three weeks. At the end of that time the acute condition subsided, the only trace of inflammation being in one knee which continued swollen, tender and painful for several weeks.

Dr Henry M. Lyman, in 'An American Text Book of the Theory and Practice of Medicine," in the article on rheumatism says, "Inflammation of the bladder is sometimes witnessed, but it is not a frequent event. The same thing is true of urethritis and orchitis." Since it is well established that the unknown special cause of rheumatism frequently affects structures of the body other than those of the joints, may it not be regarded as extremely probable that in this case the inflammation of the testicle was the primary minifestation of the rheumatic attack and the cystitis and urethritis complications of rheumatic origin? There is every reason to be satisfied that they were not of specific origin. The patient has a rheumatic heredity, and the exposure to chill and damp experienced by sleeping in a damp bed and a damp room doubtless were sufficient exciting cause to precipitate the attack.

Uric Acid Diathesis.

Dr. Haig (Medical Society of London, Nov. 23, '96,)said that it was held that if uric acid were given to mammals it appeared in the urine as urea, and the quantity of this substance in the human body cannot be affected by its administration or by the quantities contained in various articles of food and drink. His researches, however, proved that this is not true, and that uric acid, swallowed by man, gets into the blood and eventually appears in the urine, grain for grain, in proportion to the quantity ingested, and that this could be easily demonstrated in anyone, provided that the factors which influence the solubility of uric acid in the blood are kept in mind and controlled. This is a fact of far-reaching importance both in physiology and pathology, and medicine fortunately affords a field in which its truth can be put to the most rigid of practical tests. For if uric acid disease is largely due, not to excessive formation of this substance, but to its introduction (previously considered impossible), it follows that as introduction can be completely controlled, so can the

diseases due to the excess of uric acid in the blood and body. And in practice this is found to be the case, for Dr. Haig has not only completely freed himself from "the diathesis," but has also been able to help a very large number of fellow sufferers to obtain equally complete and permanent freedom. A curve was shown to illustrate the effects of the daily introduction of uric acid on its excretion, and another curve to show what can be done by stopping as completely as possible all introduction. Stoppage of introduction gives complete freedom from disease after the accumulations previously in the body have been got rid of; but freedom lasts only so long as there is no introduction; the moment uric acid in any form is again taken its toxic symptoms will return. In the face of these facts the proof that any uric acid disease is due to excessive formation becomes almost a vanishing quantity, and in place of a shadow diathesis full of unknown possibilities which constantly elude our grasp we have a well defined group of toxic symptoms due to a well-known substance contained in many of our foods, but which can, fortunately, be easily eliminated from our diet without injury to nutrition. The toxicity of uric acid and the xanthins has, from partial ignorance of their properties and from their effects being too often credited to other causes, been largely overlooked; but the above facts amply suffices to demonstrate it and it can now be easily demonstrated by anyone who cares to do so. When it has been sufficiently demonstrated Dr. Haig believes that "the uric acid diathesis" will come to be regarded as a myth.

Chloroform in Midwifery.

This was the title of a paper read by Ballaulgue—Edenburgh Medical Society—abstract from the British Medical Journal. He referred to the communications of Sir J. Y. Simpson to the society in 1847 on the first cases in which he had used sulphuric ether during labour; in three weeks he gave the result of his observations which in all essential particulars had since been fully sustained. This occurred a few months after Morton had demonstrated the production of anæsthesia in severe operations. Simpson's first case was one of turning, and no one knew whether ether would abolish uterine contraction as well as pain. His success was so complete that he felt justified in using ether to annul the pain of ordinary labour. Unsatisfied with ether he tried many other anæsthetics till in November, 1847, he introdubed chloroform as a more potent, portable, and pleasant anæsthetic. Simpson never seemed to anticipate any untoward effects from chloroform narcosis and gave it freely, relying on his many experiments on himself and his famous co-workers. One was struck with the length and fulness of its exhibition. Generally it was continued till after the expulsion of the placenta, and then so deeply was the patient under its influence that she could have her clothes changed and be lifted into another bed, before she was aware of what had happened. Simpson first substituted chloroform for ether on Nov. 8th, 1847. His success led many others to acknowledge its superiority; but opposition and all kinds of objections were taken to it, moral, theological, physiological, and pathological. France and Germany to a great extent practically rejected it. But careful investigation soon disproved the objections that had been raised; a committe on obstetrics appointed in 1848 by the American Medical Association, found anæsthesia in labour both efficient and safe, adding that in some respects it was better adapted for midwifery than general practice. The commission of the Royal Medical and Chirurgical Society reported in 1863 that there was no well authenticated instance of sudden death during its administration in labour, when it had been given by a qualified medical man. Since that time much has been written in its favour. By far the larger part of the civilised world now used chloroform almost exclusively in labour. The author then criticised in detail the recorded cases of death during the administration of chloroform in labour. In considering these cases it must be borne in mind that there was no proof, though it may be presumed that the chloroform was administered by a competent person. In one case there was admitted gross mal administration, and danger has arisen from entrusting the inhalation to a nurse or incompetent person. There might be idiosyncrasy with

regard to it as with other drugs, and impurities in the chloroform might be the source of danger. The practically complete immunity from danger and death which the parturient woman enjoyed, could be explained by considering—first the pharmacological action of chloroform; secondly, the physiological condition of the woman in labour; and, finally, the action of chloroform on this modified physiological state The pharmacological action of chloroform were: (1) increased, then suspended sensation; (2) suspended reflex action; (3) paralysis of the vaso-motor centre, with what was of the greatest importance, a concomitant feil of the general blood-pressure; (4) paralysis of the respiratory centre and slowing respiration; and (5) paralysis of the cardiac ganglia. The modifications in the physiological conditions of the parturient woman in this condition were: (1) general increase of vascular tension which occurred even early in pregnancy; (2) increase in the total mass of blood in the system during the second half of gestation; and (3) eccentric hypertrophy of the heart. In active labour the chief phenomena were intermitting muscular action of the uterus, abdominal nucles, and diaphragm, with consequent compression of the bloodvessels in the abdomen; an accelerated pulse rate; forced exiration and increased costal breathing. These results in a permanently high blood-pressure, with an intermitting increase of it during the pains and a higher standard of activity in the inspiratory centre. The action of chloroform on this modified physiological condition, as contrasted with that when given in the ordinary physiological state, was that the blood-pressure was not dangerously reduced from its being set at such a high level, and the respiratory centre was not easily paralysed because of the augmented activity from the stimulation of more forcible respiratory movements. It was well known how shallow the respiration might become and how often it tended to stop in surgical anæsthesia; but in obstetrical anæsthesia this was prevented by the physiological "artificial respiration," if such a phase could be permitted, which recurred with each pain. During a pain the rapid action of chloroform was quickly recovered from by the forced expiration, and the nerve centres temporarily stimulated by the increased respiration resisted the effect of the depressing agent, while the general high blood-pressure furnished a reserve power of resistance against any outward effect or excessive amount of the anæsthetic. Moreover, it had been affirmed, and recently corroborated, that in cases of chloroform toxæmia when respiration had ceased the rapid dilatation of the spincter and stimulated the respiratory centre and re-established respiration. To the forcible dilatation of the vagina and external parts in labour might act as a constantly recurring stimulus to this centre, and so lessen the danger of its paralysis when chloroform was most deeply given and most rapidly inhaled. Chloroform was also life preserving. It prevented shock and lessened exhaustion in obstetric operations and long labours. It prevented dangers which might arise from brittle blood-vessels, and by controlling muscular action and minimising blood-pressure in heart d sease had saved many lives. The only possible theoretical contraindications to its use might be in cases of emphysema of the lungs, owing to the possibility of an overdosage before any apparent untoward effect could be seen, and also in cases of great and rapid loss of blood, which rapidly lowered the blood-pressure, This would call for great caution in its administration or the substitution of ether. In concluding, he submitted: (1) That in obstetric functions the simpler the method of administration the better; the method was a secondary matter, but the care and watchfulness of the administration all-important; (2) that the best diluent still was air; that the amount of chloroform poured upon a towel or inhaler was of little moment, provided always that air was at first freely admitted and that the effect of the drug upon the person was closely observed; (3) that attention should be persistently directed to the respiration; (4) that in normal labour chloroform should be given only during a pain, till the head was on the perineum and then to full unconsciousnes; and (5) that after the birth of the head, chloroform should usually be stopped. Again, that the practitioner was always justified in giving chloroform in normal labour and should offer it, and that it was his duty to do so in all casses of severe labour and in all cases of operative interference.

The Treatment of Gonorrhœa by Argonin Injections.

By J. W. Daniel, M. D., Houston, Texas.

Among the many affections that the physicians is called upon to treat, there is perhaps none which gives him more trouble than specific urethritis, or gonorrhœa. Any new plan of treatment that gives promise of successful results is, therefore, always of practical interest. It is for this reason that I wish to briefly report my clinical experience with the new remedy, Argonin, based upon its exclusive use in the treatment of twenty-six cases.

Argonin is a combination of silver with the casein of milk, occurring in the form of a white amorphous powder, soluble up to ten per cent. in hot water; fifteen parts of Argonin contain as much silver as one part of Silver Nitrate; unlike this latter drug, however, it is not decomposed by albuminous substances, nor is it precipitated by sodium chloride. It is also claimed for it that it does not irritate the urethral mucous membrane, even in concentrated solution.

The truth of this latter claim I have demonstrated to my entire satisfaction, as in none of my twenty-six cases (twenty of which were in the acute stage) was there any complaint of pain or irritation of the canal; on the contrary, the scalding of the urine quickly disappeared, and the inflammation rapidly subsided. Chordee was complained of in one case only, disappearing within twenty-four hours after beginning the use of the remedy.

A careful observation of each case, with a daily examination of the discharge, shows that in the 20 acute cases the gonococci disappeared entirely from the fourth to the sixth day after the commencement of treatment. To be more exact, in one case the gonococci disappeared on the second day (the shortest period in any case treated), in 13 on the fourth day, in 2 on the fifth, in 3 on the sixth, and in 1 on the seventh. Argonin was employed in the strength of 15 grains to the ounce of water and from six to eight applications were made during the 24 hours. No restrictions were placed on diet, but alcoholic drinks were to be strictly excluded. Owing to the difficulty of obtaining sufficient quantities of Argonin when the remedy was first introduced, I was compelled to use it very sparingly, and hence never prescribed it in stronger solution than that above mentioned. From my experience so far, I am convinced that the efficacy of the remedy is not to be gauged by the strength of the solution used; in other words, a 10 per cent. solution is no more efficient in destroying the gonococci than a 5 per cent. solution. The method I have adopted of using the weaker solutions from six to eight times a day is much more effective than making one application a day of the stronger solution. It is almost impossible to bring the medicine into contact with the entire diseased surface in one application, or for that matter in several applications, or reach the intricate hiding places of the gonococci after the most careful procedure. My plan is to use the ordinary penis syringe for the first three or four days; after this, while still continuing the use of the smaller syringe. I use once or twice a day a long nozzled instrument reaching to the posterior urethra with which I make applications to the deeper structures and direct the patient to retain the injected solution for eight or ten minutes. After the discharge had subsided, which occurred about the seventh day in the majority of cases, the injection was continued for six or eight days as a precautionary measure. The moment all strings or mucous threads (tripper-faden) disappear from the urine, I conclude that the disease is thoroughly cured and the patient may discontinue the remedy.

In only two cases did the discharge return, in one on the 9th and the other on the 15th day, these two having discontinued the remedy without consulting me. The discharge rapidly subsided after resuming the injection, and did not reappear.

I have also employed Argonin in six cases of gonorrhœa complicated by posterior urethral conditions and strictures, the results of former attacks. The strength of the solution used in these casds were from 8 per cent. to 10 per cent. In each case the most flattering results were obtained, the discharge ceasing after six or seven days' use of the remedy, the gonococci disappeared in a few days, and

there was every indication that a cure had been affected, but after the remedy had been discontinued for a short time, the discharge reappeared, and while all the symptoms were modified in their character, there was still present the evidence of the disease. From my observations so far, I feel confident that in uncomplicated cases of acute gonorrhœa (especially in primary cases) Argonin will relieve all those distressing symptoms incident to the first stages of the disease, and effect a complete cure in from twelve to eighteen days if the treatment is properly followed out.

I am more than satisfied with the results so far obtained from the use of the drug in acute urethritis venerea, and hope the experience of other practitioners will be equally as satisfactory and gratifying as mine has been.—*American Therapist.*

Puerperal Eclampsia; Its Etiology and Treatment.

Dr. William Warren Potter, of Buffalo, read a paper at the 91st annual meeting of the Medical Society of the State of New York, Albany, Jan. 26, 1897, entitled "Puerperal Eclampsia; Its Etiology and Treatment."

He said, inter alia, that we seem to have arrived at the renaissance of eclamptic literature, that while the subject is being discussed in magazine articles and societies it would not answer for this society to keep silent.

Though the pathogenesis of eclampsia is still unsettled we are certain that it is a condition *sui generis*, pertaining only to the puerperal state, and that to describe, as formerly, three varieties—histerical, epileptic and apoplectic—is erroneous as to pathology and causation as well as misleading in treatment.

The kidney plays an important office in the economy of the eclamptic. If it fails to eliminate toxins, symptoms are promptly presented in the pregnant woman. Renal insufficiency is a usual accompanient of the eclamptic state. Overproduction of toxins and underalimination by the kidney is a short route to an eclamptic seizure. However, many women with albuminuria escape eclampsia and many eclamptics fail to exhibit albuminous urine.

The microbic theory of eclampsia has not yet been demonstrated. The toxemic theory in the present state of our knowledge furnishes the best working hypothesis for prevention or cure.

Treatment should be classified into (a) preventive, and (b) curative. The preventive treatment should be subdivided into medicinal and hygienic; and the curative into medicinal and obstetric. A qualitative and quantitative analysis of the urine must be made at the onset. If there is defective elimination something must be done speedily to correct a faulty relationship between nutrition and excretion. One of the surest ways to control progressive toxemia is to place to woman upon an exclusive milk diet. This will also serve to flush the kidneys and thus favor elimination. Distilled water is one of the best diuretics; it increases activity and supplies material—two important elements. In the pre-eclamptic state, when there is a full pulse with tendency to cyanosis, one good full bleeding may be permissible, but its repetition should be regarded with suspicion. If there is high arterial tension—vasomoter spasm—glonoin in full doses is valuable.

When eclampsia is fully established the first indication is to control the convulsions. Full chloroform anesthesia may serve a good purpose. If the convulsions are not promptly controlled the uterus must be speedily emptied. This constitutes the most important method of dealing with eclampsia. Two lives are at stake, and by addressing ourselves assiduously to speedy delivery of the fetus we contribute in the largest manner to the conservation of both.

Rapid dilatation first with steel dilators, if need be, then with manual stretching of the os and cervix, followed by the forceps, is the nearest approach to idealism. Only rarely can the deep incision of Duhrssen be required. Cesarean section should be reserved for extreme complications, as deformed pelvis, or to preserve the fetus when the mother's condition is hopeless. Veratrum viride is dangerous, uncertain and deceptive in action.

In eclampsia of pregnancy, *i. e.*, prior to term, the aseptic bougie, introduced to the fundus and coiled within the vagina, may be employed to induce labor. Finally, to promote the elimination of toxic material diuresis, catharsis, and diapho-

resis should not be forgotten; neither should the hot air bath, nor the hot pack be overlooked.

Directions for the Use of Glutol-Schleich.

Wounds may be divided into four classes, in each of which Glutol must be employed in a special manner.

1. Fresh traumatisms and operative wounds in which the Glutol treatment is begun within the first few hours after the solution of continuity.

2. Wounds which have been exposed to the possibility of infection for more than four hours.

3. Inflamed and suppurating wounds.

4. Larger losses of substance and ulcerations.

1. In recent wounds the Glutol must be brought into intimate contact with the whole of the raw surface. In incised wounds the opposing surfaces must be well powdered with the material, and an extra quantity gently pressed in between their margins. In irregular and lacerated wounds it must be carefully rubbed into all the cavities and corners of the lesion. Portions of tissue that are manifestly incapable of recuperation must be removed; yet oftentimes endangered fragments, such as portions of skin and bone, recover their vitality under the Glutol treatment. All wounds containing necrosed material, however, must be careful watched. The scab that is formed may be allowed to remain in situ until healing occurs.

2. In older injuries the primary Glutol dressing must be renewed after 24 hours in every case.

3. Inflammatory and suppurating wounds must be treated according to general surgical principles before the Glutol is applied, so that sufficiently healthy tissue may come in contact with the Glutol. Incision, drainage, cleansing of the wound, removal of the dead tissue fragments, etc., must be employed as indicated. If a scab forms, it must be removed in some places at all events, during the first 48 hours, to enable fresh Glutol to come in contact with the denuded surfaces.

4. With ulcerated areas the preliminary removal of all dead or non-viable material is of the greatest importance, and here also the scab must be removed from time to time.

Burns in any Stage can be Quckly Healed with Glutol.—Where the suppuration is free it is well to remove the hardened or more or less fluidified Glutol from time to time, and apply fresh material.

The great advantage of Glutol lies in the absolute certainty of auto-disinfection of the wound by the tissue cells themselves. This auto-disinfection occurs in infected wounds also, as soon as neighboring and healthy cell material comes in contact with the Glutol in sufficient quantity. The greatest care must therefore be taken to open up all infected cavities. Tortuous wounds and suppurating sinuses may be treated with the Glutol tampon.

The layer of Glutol must always be covered with aseptic gauze, except in the case of small wounds, where the scab formation occurs in a very few hours.

Dr. C. L. Schleich.

Berlin, December, 1896.

The grated form will hereafter be supplied exclusively, as Dr. Schleich has found it to give better results than the fine powder.

Dr. Max Olny publishes in No. 12 of the Therapeutische Monatshefte, on pages 676 to 77, the results obtained in a series of experiments with Phenocoll Hydrochlorate, entitled "Phenocoll Hydrochlorate in Acute Arthricular Rheumatism." The remedy was used at the Clinic at Halle, Germany, in sixteen cases of acute arthricular rheumatism in single doses of fifteen grains, 45 grains per day. The writer was very well pleased with its prompt action. In three cases the remedy failed; in all other cases some of which had been treated without success with Sodium Salicylate, it reacted promptly. In cases of recent standing the pain diminished after taking 9 grammes, and complete recovery occurred after taking 21 grammes. The average time of treatment was thirty days. In recurring cases on an average 25 grammes of Phenocoll were required and treatment lasted 33 days.

Of Salicylate of Sodium, however, it was necessary to prescribe 41 grammes in daily doses of 6 grammes, and if only four grammes per day were taken, 49 grammes were required to relieve the pain. When the first mentioned dose was administered, on an average thirty days were required

to a case; with the smaller daily dose 46 days were required. Relapsing cases were given a daily dose of 6 grammes, averaging 48 grammes of Salicylate of Soda for a period of 44 days, and 4 grammes per day required 55 grammes and treatment for 39 days.

Better results were therefore obtained with Phenocoll Hydrochlorate than with Salicylate of Sodium. It is necessary to still continue with Phenocoll for a few days after the pains have subsided, giving every second day one gramme, to be taken in the morning and evening. If after a period of seven or eight days no relapse has occurred, which cannot be entirely prevented any more than with Salicylate of Soda, a lasting cure can be depended upon.

The influence of the remedy on the temperature is quite variable. Temperature becomes normal as soon as the affection of the joints has disappeared. Considerable perspiration was observed with weak patients; other side effects such as cyanosis, collapse, etc., were never noticed.

Double Murphy Button Anastomosis.

At a recent meeting of the Medical Society of the State of New York, Dr. James H. Glass, Surgeon in charge of the Faxton Hospital, Utica, N. Y., read a paper reporting the fourth successful case of Double Murphy Button Anastomosis. The operation was on an enfeebled woman, 42 years of age, for Sarcoma of the intestine—obstruction not being complete—the left uterine ligament tube and ovary being involved and removed, although microscopically not showing malignant degenerative changes.

Seven and one-half inches of the decending colon with four and one-half inches of the ileum were resected. The largest button was used for the colon approximation, the next largest being used for the ileum. The colon button was passed after five days, the ileum button not appearing until the twenty-sixth day, when the colicky pain, which it was probably responsible for, disappeared.

Dr. Glass called attention to the desirability of avoiding injury to the parallel artery of the mesentery, the danger of intestinal paralysis and slough being thus minimized.

The writer maintains that the button operation meets the requirements of an intestinal approximation proceedure (end to end approximation—acurate coaptation—a non-contracting scar—rapidity and ease of execution)—better than any yet proposed, while the mortality, which is 6.25 in acute obstruction and 23.3 in obstruction from malignant disease, is much lower than in other similar operations, which show, according to Senn, a mortality of 58 per cent., while the 238 collected cases of Curtis, from 1875, give a mortality rate of 68 per cent. Wier reports a mortality of 100 per cent. in primary suture; Reichel giving the mortality in primary suture at 75 per cent. and 37 per cent. in secondary operations.

ALBANY, GA., Jan. 28th, 1897.

Editors of The Charlotte Medical Journal:

DEAR SIRS:—I've just read with much interest the leading article in Jan., 1897, No., on "The Autumnal Fevers of the South Atlantic States and their Treatment," by Dr. Bedford Brown.

He beutifully and suggestively portrays its pathologic conditions and distinctive symptoms; making a diagnosis quite clear to the most inexperienced.

I would that every practitioner in all our Southland might read it, as read it they must with infinite profit to themselves and their patrons. Then we would hear less of those despicable misnomers, Typhoid and Typho-Malaria, terms which when applied to fevers in this climate, always suggest the contemptible ignorance and laziness of the doctor using them.

I have nothing to add to Dr. Brown's lucid and pregnant portrayal of the characteristic features of the different types of disease in question, but wish to give the profession, in connection with his valuable treatment, my line of therapeutics in combating its ravages. I will state just here part of it is borrowed.

In the Intermittent and acute type of Remittent one has plenty of time to secure an eliminative action of all the secretory glands in and adjacent to the alimentary tract. This I believe is always prudent for several reasons apparent to all, and is best secured by small and oft repeated doses of mercurials (say $\frac{1}{40}$ to $\frac{1}{5}$ gr. hydrarg chlor. mitis.) com-

bined with ipecac and sodii bicarb., or possibly better, in the more obstinate cases, with colocynth, podophylin, aloes, nux vom. and hyocyamus. Even in the prolonged type (following Dr. Brown's classification), in the premonitory stage, this eliminative treatment would render the after treatment more efficient.

I do not agree with Dr. Brown in his method of giving quinine. The doses are too *heroic* entirely, except in the pernicious or congestive type, and then the hypodermic injection of the alkaloid is far superior to the rectal. Neither do I believe that his time of giving quinine is best.

In all types, except the pernicious, the best time for the administration of quinine is from 8 to 15 hours before the time for another exacerbation; the entire amount you expect to give in any 24 hours being given within 3 or 4 hours in hourly doses. Always give during the decline, sweating or remittent stage.

Now, as to my method of giving quinine as to dose, I rarely ever give it alone, but in combination with other anti-malarials, viz., opium and piperazine.

A favorite formula is

R Sulphate (or bi-sulphate) quinine, gr. xxx
Powd. ext. opii..... gr. iii
Piperazine,..... gr. x

M. Put into capsules, No. xii.

Sig. One every hour for 4 doses, commencing 8, 10 or 15 hours before the expected exacerbation.

NOTE.—This is always determined at my first visit, and I designate the time or hours for giving in figures (thus say 3, 4, 5 and 6) o'clock, A. M. or P. M., as the case may be. In conjunction I give some of the antipyretics, preferably phenacetine or ammonol, if any time the temperature reaches 103 or over. The vast majority of cases will not need a repetition of the above recipe, and may be put upon anti-malarial tonic at once, such as

R Sulph. quinine..... gr. L
Sulph. ferri exsic..... gr. xl
Acid arseniosus..... gr i
Ext. nux vomica..... gr. xv
Ext. gentiam..... gr. xl

M. Ft. pills No. xl.

Sig.—One t. i. d. after meals.

Dr. Brown's suggestion of the appropriateness of glonoin in the congestive or aleged stage of the pernicious type is a valuable one, and is to be recommended as almost specifically meeting the exigencies in hand.

W. B. RUSHIN, M. D.
No. 98½ Broad St.

California Fig Syrup.

The harmless and laxative character of figs has been recognized for ages. They are among the world's most ancient fruits and have been used for food purposes from time immemorial. The California Fig Syrup Company, starting with these facts, have succeeded in making an ideal laxative mixture, both in its simplicity, pleasantness and absolute freedom from any drastic effects. The mixture is not a conglomerate compound of purgative medicines, but a scientific pharmaceutical preparation based upon physiologic principles, and the management guarantee in every particular the substances that it contains. The formula gives each teaspoonful as containing:

Solution of laxative principles of Senna, fifteen minims; Aromatic Syrup of Figs, three minims; white sugar, twenty-four grains; water, eighteen minims. The above combination represents fifteen grains of Senna.

In cases of children and individuals suffering from debility this is doubtless the mildest and best possible laxative. The aromatic constituents render griping impossible, at the same time the laxative effects will be pleasant and sure.

The Present Prevalence of LaGrippe.

The following suggestions will be of value at thir season. The pains of acute influenza are something indescribable, especially when associated with high temperature. To relieve these with some preparation of opium is only to increase the cerebral congestion and aggravate the extreme prostration. Sharp, darting pains are no more severe than are the dull, heavy and persistent pains in the muscles and bones which so often obtain in this disease. Clinical reports verify the value of antikamnia in controlling the neuralgic and muscular pains, as well as the fever. In fact, antikamnia may now be called the *sine qua non* in the treatment of this disease and its troublesome sequelæ.

"It seems hardly necessary to indicate

the conditions, when the use of two such well known drugs as 'antikamnia and quinine' will be serviceable, nor the advisability of always exhibiting 'antikamnia and codeine' in the treatment of the accompanying neurosis of the larynx, the irritable cough and bronchial affections. Relapses appear to be very common, and when they occur the manifestations of a more severe nature than in the initial attack. Here the complications of a rheumatic type are commonly met and 'antikamnia and salol' will be found beneficial. Antikamnia may be obtained pure, also in combination with the above drugs in tablet form.

"Tablets mark the most approved form of medication, especially as they insure accuracy of dosage and protection against substitution. To secure celerity of effect, always instruct that tablets be crushed before taking."—*Medical Reprints.*

Phonendoscope.

At a meeting of the Buncombe County Medical Society, January 18th, 1897, Dr. C. L. Minor read a paper upon the Phonendoscope (see original article on page 153).

In the discussion following, Dr. J. H. Williams said he had been using the Phonendoscope for some months and had found it to be of great value in certain cases. He thinks he can tell with more distinctness which valve of the heart is diseased than with the ordinary stethoscope.

Dr. Ambler, of the Winyah Sanitorium, said he had made use of the Phonendoscope in his work there, but does not believe it so much superior to an ordinary stethoscope if the latter is properly made. A good stethoscope should be so made as to come into perfect contact with the skin as does Paul's. He thinks, however, that there is a field for this new instrument with some opening for improvements.

Dr. Minor called attention to the fact that after using the Phonendoscope exclusively for some time one might forget the normal sounds of the heart and lungs, for this instrument exaggerates these sounds, and so, for this reason, the ear to chest method of examination should always be used also during an examination.

Operation for Vesico-Vaginal Fistula

Mr. Stanmore Bishop, in a paper read before the Medical Society of London, January 25th, 1897, described an operative method he had used with success for Vesico-vaginal Fistula. He reviewed in detail the various methods that had been employed during the last two centuries with very indifferent success for the purpose of relieving this distressing condition. His own method of operating was as follows: The patient having been prepared, a circular incision was made through the vaginal mucous membrane, which was then reflected. Four stitches were then passed through the flap but not tied. Specially devised curved forceps were introduced per urethram and through the orifice to catch the sutures, the threads of which were withdrawn by the forceps and allowed to hang out of the urethra. By gentle traction on these a kind of frill was everted into the bladder. Before any firm traction was made a circular purse-string suture was passed from the vagina through the connective tissue only of the flap. This was secured to close the orifice and sometimes a second suture was desirable. The loose sutures originally introduced were easily withdrawn through the urethra. In cases where an extensive raw surface was left on the vaginal side it might be advisable to apply a Thiersch from some hairless part of the body, The vagina was stuffed for a few days after the operation. He claimed as advantages for the method that there was no tension of the uniting surfaces, the mucous floor of the bladder was re-formed, and the capacity of the bladder was not interfered with. The sutures were buried and did not project into the lumen. The thickened cicatricial edge of the fistula supported the wound like a splint.

C. J. Baugh, M. D., Menan, Idaho, writes: It affords me great pleasure to report favorable results from the use of Hagee's Cord. of Cod Liver Oil Comp. in a case of faulty nutrition with a tendency to Phthisis Pulmonalis. The patient had been under my treatment without any great improvement, when I decided to try Cod Liver Oil in the form which you manufacture; so I did and had excellent results.

The Antitoxin Treatment of Diphtheria.

Dr. Joseph E. Winters, at a recent meeting of the New York Academy of Medicine, said that he did not think a case of diphtheria of the nasal passages, with complete obstruction, could be found which had recovered since the advent of antitoxin into the Williard Park Hospital. There had been a case of obstruction last year, but in that the obstruction was not due to membrane but to inflammatory swelling, and no plug had been discharged.

He said that the question of the antitoxin treatment of diphtheria would never be settled by such statistics as had been presented, but only by the careful study and observation of physicians in private practice. In 1884 there had been 1090 deaths from diphtheria in the city of New York, and in 1887, 2167 deaths—in other words, without antitoxin. Again, in 1890, there had been only 1262 deaths, while in 1894 there had been 2370. Again, in the city of Philadelphia, in 1888, there had been 350 deaths, in 1889 375, and in 1892, 1424 deaths. These variations must be taken into consideration in weighing the value of any treatment for diphtheria. Dr. Fraves, of Dublin—ranking with Sydenham as the greatest of clinicians—had stated that from 1801 to 1804 almost every case of scarlet fever that he saw in private, consultation or hospital practice died; that from 1804 until about 1831, although scarlet fever was raging constantly, there were very few deaths: while from 1832 to 1835 there was an epidemic of precisely the same severity as had existed from 1801 to 1804.

Again, Loeffler had treated 71 consecutive cases of diphtheria with his solution, without a death, yet he did not claim anything special for this solution. Dr. Bieser, of New York city, had reported twenty-five consecutive cases of diphtheria, treated in private practice without antitoxin, without a death. Dr. P. H. Ernst, of the same city, had reported 32 cases of diphtheria treated in dispensary practice, without antitoxin, with only four deaths, and in the same practice nine consecutive intubation cases with seven recoveries. On the other hand, Dr. Ernst had treated twelve dispensary cases of diphtheria with antitoxin, and seven of them had died—a death rate of 58 per cent. Dr. Bisser had used antitoxin in seven consecutive cases of laryngeal diphtheria, five of which died. It has been stated that in these cases the antitoxin had been used after the fourth day, but this was not correct, for four of them had received it on the first or second day. Dr. J. Lewis Smith made the statement in his book that last year he had treated in the Foundling Asylum 31 cases, in a large proportion of which the treatment had been begun on the first or second day of the disease. Out of this number there were seventeen deaths. The difference in his results now and then were to be explained by the difference in the character of the epidemic. We have been told of the very low death rate in Paris and Berlin, but why had nothing been said about certain other cities of some importance—e. g., London. In London, 1891, there were 1361 deaths from diphtheria, and in 1873 3,263 deaths; but an examination of the files of the London Lancet for the last eighteen months would show that without a single exception the death rate was higher on an average every single week for this period, or since the use of antitoxin, than the average corrected death rate for the past ten years. It had been claimed by some that the higher death rate in England is due to a difference in the antitoxin and to the greater conservatism of the British. Although the reports showed that antitoxin is used in all the hospitals of the Metropolitan Asylums Board and in the other hospitals of London, the death rate is higher than for the last ten years. Dr. Winters said that, in his opinion, all serums were alike—they were all equally good, and all equally dangerous.

At the Willard Parker Hospital last August the mortality rate was 37.7 per cent. under the use of antitoxin, and in the month of November 25.6 per cent. This unusually high death rate should be attributed to the character of the epidemic at that time.

Regarding the length of time the tube is worn in cases treated with antitoxin, he called attention to the statement of Dr. Edwin Rosenthal, of Philadelphia, that it had shortened this period.

William H. Welch, of Philadelphia, who

had had a larger experience with diphtheria than any other man in America, had stated that the average time for wearing the tube was ten days, while before the introduction of antitoxin the average time was between five and six days.

Dr. Winters took up the question of the dosage. He said that just before the middle of last November it had been decided that the dosage of antitoxin in the Willard Parker Hospital had not been adequate, and it was, therefore, ordered that the dose should be increased from 1,500 or 2,000 to 6,000 units in every case of diphtheria. That plan had been carried out in 30 cases. Of these 18 were dead—a death-rate of 60 per cent. in the cases receiving these enormous doses. At one time last year it had been decided to increase the dose of antitoxin in this hospital. Accordingly, the cases alternately as admitted, were given 2,000 and 3,000 units respectively, in order to determine the value of the larger and smaller doses. Twenty-three cases received 1,000 units, and in these the mortality was 30.4 per cent.; 22 cases received 3,000 unitis, and in them the mortality was 50 per cent. Then the larger doses abandoned. After that experience one would have thought nothing more would have been heard of the larger doses of antitoxin. With the recent dosage of 6,000 units the mortality has increased from 50 to 60 per cent. Many of the cases are still very ill; only four had recovered and gone out.

Dr. Winters said that statistics meant nothing; it was careful study of individual cases in private practice that told. We were not looking for a specific which would cure diphtheria in Paris and Berlin, but which would cure diphtheria all over the world. When Paris should be visited by the kind of epidemic now raging in London, there would be in Paris the same high death-rate that now exists in London.

Dr. Winters then detailed many unfortunate experiences that physicians in private practice in New York city had had with diphtheria antitoxin. For instance, he said that Dr. John Dorning had treated with it seven consecutive cases of diphtheria in private practice—some in the first twelve or eighteen hours—yet every one had died. Dr. Alexander Dallas, of Bayonne, had treated eleven consecutive cases of diphtheria in private practice, with ten deaths. The one that got well received the antitoxin first on the fourth day of the disease. The speaker said that it was his belief that when a case of diphtheria came under treatment early in the disease, there would not be, as a rule, an increase of the toxemia after the first two days, but that by injection of antitoxin in this early stage, a toxin was actually added.

On June 3, 1896, he had seen in consultation with Dr. Meyer, a baby of eight months, with minute diphtheritic patches in the throat. This child had been given 1,000 units of antitoxin on the second day of the disease, and this dose had been repeated on the following day. When he had seen it, on the fourth day of the disease, it was in a state of tonic spasm. The first injection of antitoxin had been given in the afternoon, and that night there had been a convulsion. The next afternoon, a few hours after the second injection of antitoxin, there had been another convulsion, and from the time he saw it until its death the tonic spasm had never relaxed.

Another case seen in consultation was a breast fed baby of four and a half months who, on the previous afternoon, had been given 750 antitoxin units, and that morning, at 11 A. M., 500 units more. When seen by him, between 1 and 2 P.M., it had a temperature 106°F., the pulse was too fast to be counted; the respirations were rapid and irregular, and there were almost no physical signs in the chest. The entire body was in a state of tonic spasm, and the mother stated that it had been so since the previous afternoon. The child died two days later.

It was important to note that there was abundant proof that these things occurred when there was no diphtheria. Thus, the daughter of a physician, immediately after receiving an injection of antitoxin, had a violent convulsion, with cyanosis and an almost imperceptible pulse. She eventually recovered, and it turned out that she had not had diphtheria. There was no neurotic history in this case, and she had never had a convulsion before.

All the world had heard of the death of Professor Langerhan's child after an injection of antitoxin, given as a preventive. It had been said that this child died from food obstructing the thrachea, but al-

though the case had been originally published by every medical journal, Professor Langerhan's denial of this statement had been published in only one medical journal.

Dr. Winters said that he had been told by Dr. S. S. Robinson, of Louisiana, that he had injected a little boy with ten cc. of Behring's antitoxic serum, and that within a few minutes the boy had gone into convulsions and had died withing thirty minutes. A sister injected at the same time had a slight convulsion, but recovered. D. C. C. Pease, of Pennsylvania, had reported the case of a boy of eight years, into whom he had injected ten cc. of Mulford's antitoxin. This dose was repeated that evening, and the next morning. At noon his temperature was 97° F., the pulse 36., and there was cyanosis and great postration. With vigorous stimulation he had succeeded in bringing the boy out of this, but three days later the child died in convulsions,

There were many cases of this kind, Dr. Winters said, that had not been published for obvious reasons. He believed that antitoxin was unquestionably a most dangerous poison, and that any man who used it took the risk of immediately causing death, or if the patient did not die immediately, of producing, as Dr. J. Blake White has stated a state of chronic invalidism.

Dr. Winters cited in detail the histories of a number of cases at the Willard Parker Hospital that had received very large doses of antitoxin. The folllowing are fairly illustrative:

An infant, one year old, was admitted on November 26, at 11.50 A. M., with membrane on either tonsil, and with croup. Six thousand units were given on admission, and half a drachm of paregoric, and poultices were ordered. Intubation was required ten hours and twenty minutes after admission. The laryngeal symptoms had steadily increased notwithstanding the large dose of antitoxin. On November 28 the temperature at 2.30 P. M. suddenly rose to 107.4°, and it died at 6.10 P. M.

A child of two years was admitted on November 17, having received on the preceding day at the Presbyterian Hospital, 2,000 units of Antitoxin. On the morning of admission to the Willard Parker Hospital it was given 1,500 units, and in the afternoon 3,500 units. Notwithstanding the treatment had been begun on the first day of the disease, the child had to be intubated that night. Four days later the tube was removed, but it had to be replaced. Intubation and extubation had to be continued until the child's death. If antitoxin had the slightest influence in preventing extension to the larynx, there should have been no occasion for intubation in this case.

Dr. Winters further said that he was most concerned with the influence of antitoxin on the nervous system, the kidneys, the circulation, and more remotely, on the blood itself. One physician had told him that he had inquired among druggists, and had found that there was little or no call for antitoxin at the present time. It was also significant that while at one time the Board of Health kept on hand upwards of fifty horses for the production of antitoxin, they had had only eight horses a year ago, and now had only four horses.

The Causes of Diseases.

Professor Jaccoud, in The Hospital, Jan. 23, '97, urges that in the consideration of microbial diseases the non-microbial factors in their causation should never be lost sight of. He points out what is perfectly well recognised by all authorities, that although many diseased conditions are the result of the growth of microbes within the body of the patient, such growth often depends on the condition of the individual allowing them to develop, rather than on any over-mastering power of intrusion possessed by the micro-organism themselves. He urges also that in many cases the time of the development of the disease bears no relation to the moment when the microbe gained access, the sinning organism being in some cases a permanent denizen of the body, and only becoming pathogenic in consequence of some change in the constitution of the patient. From this he argues that the virus is only one of the factors in the development of disease, and that it does not take effect unless the patient is in a receptive state. This predisposition may be innate and permanent or it may be accidental and temporary,

and it constitutes the morbid opportunity without which the virus remains inactive, or at most determines slight disorders quite different from those it produces when in full activity. We thus have brought back to us the importance attributed by all the older race of physicians to congenital predisposition, constitution, temperament, and even to so-called "cosmic influences," all of which must be looked upon as factors in the production of disease, just in so far as they render the organism more fitting soil for the growth of the micro-organism within it, These ideas are old enough, and are generally recognised by those who have studied the etiology of disease. Never theless, it is well that they should be repeated and enforced time after time; for the idea that infectious diseases depend solely upon infection is extremely seductive, and has peculiar fascinations for half-educated sanitary authorities. Natural science refuses, however, to be limited to such simple hypotheses, and those who would understand the causes of infectious diseases must understand that under the term "causes" are included not merely the microbe, but all the details in the social life of today which render man more or less open to its attacks. This is a long story, and far from simple.

The Phonendoscope.

Anfrecht states that there is no special advantage attached to this instrument when used to render audible sounds and murmurs produced in organs; in determining the size of the organs, however, he thinks it of considerable value. For this latter purpose he refers (British Medical Journal) particularly to the friction method, which consists in drawing the finger over the skin surface while auscultation is practised. With the ordinary methods it may be quite impossible to determine the shape and size of the heart, or its enlargement in cases of emphysema. By the above-mentioned method of using the phonendoscope, the size of the whole heart or of the ventricles and auricle may be exactly ascertained. The determination of the size of the ventricles, and especially of the right auricle, may be of great value in the diagnosis of some cardiac lesions. Relations of a pathological character must not be overlooked if mistakes are to be avoided. In three experiments carried out on the dead body the cardiac limits were wrongly placed owing to the hydro-pericardium, carcinoma of the lung, etc., but in eight other cases the boundaries of the whole heart and of its individual parts were correctly mapped out. In other cases a diagnosis made during life by the friction method was confirmed after death. The author, however, draws special attention to the fact that the phonendoscope itself is not absolutely indispensable to the friction method, as its place may be taken by an ordinary stethoscope. He has modified the ordinary wooden stethoscope by attacking to it tubing and an ear-piece, so as to make it available for this purpose.

Placenta Prævia.

Heil in the Clinical Journal describes the practice now adopted at the Heidleberg Maternity in dealing with placenta prævia. The membranes are first ruptured so as to bring down the head. When dilatation is complete there is no doubt what ought to be done. But if the os remains narrow, and in cases where the hæmorrhage begins before labour, antiseptic plugging of the vagina and cervix is indicated. Braxton Hicks's method is dangerous for the child, but quite allowable if it be dead or hardly viable, or if the mother be in immediate danger. Heil notes 28 placenta prævia labours, 29 children being born; 4 mothers died (14.28 per cent.); 14 had high temperatures; in 10 of these the tampon had been employed; out of the remaining 14 where there was no fever the tampon had been inserted in 6. Out of the 29 children, 19 (65.5 per cent.) were at full term, 9 delivered dead, 4 died within twenty-four hours of birth, and 16 (55.1 per cent.) survived. In 2 cases admitted with complete dilatation both mother and child were saved. Out of 19 children at term that were living when labour began, 11 were delivered alive by turning, whilst in 8 cases the tampon was applied till dilatation was complete, only 1 child being lost, and in that instance the pelvis was rachitic; all 8 mothers were saved. These statistics are favourable to the tampon.

Concerning Medical Systems and Delusions.

In a recent writing, (New England Medical Monthly) Dr. Franklin Staples gives an historical sketch of the Eighteenth Century Systems, Theories, and Medical Delusions; is which is shown the origin and early history of some of the medical *isms* and so-called *pathies* of modern times. In the history of medicine, the eighteenth century may be called the period of systems and theories.

George Earnest Stahl and Freidrick Hoffman were teachers in Germany at the close of the seventeenth and early part of the eighteenth century. Stahl was first at Jena, then at Halle and spent the latter years of his life at Berlin. Like other teachers of the times, he was the author of a system. In this he made the anima (soul), the life giving principle; it imparts life to matter, is the motive power in the body, and while active resists decay and putrescence. It is self creative and constructs the body.

The iatro-mechanical and chemical school of Borelli and Sanctorius of Italy, and of Sylvius of Leyden, of the seventeenth century, were still in existence, but Stahl discarded chemistry and mechanics, and declared that a knowledge of anatomy, except in its broadest outlines, is useless in the healing art. A modern writer has said that the anima of Stahl closely resembles the sub-conscious personality of modern hypnotism. A recent German writer says: "Stahl scorned anatomy and physiology, was the enemy of erudition and its authorities, and swore boldly by the maxim, that good theorists (among whom he was one of the chief) may be bad practitioners."

Freidrick Hoffman was born at Halle in 1860. He was a student of Wolfgang Wedel, afterwards of Robert Boyle in England, was professor at Halle, and at Berlin was physician to King Frederick I. Hoffman's "dynamic" theory is given as follows: "He supposed the universe to be pervaded by an ether-like "vital fluid," which exists in a specially active form in the nervous system of animals, and through it acts upon their muscles both voluntary and involuntary, keeping them in a state of partial contraction or "tonus." The same fluid exists also in the blood; the cause of life is the circulation of the blood; the body lives as long as the blood and humors are in motion; if they stop there is death. Disease is a marked disturbance in the motion of the solids and fluids. Here appears the doctrine of the mechanical system. Hoffman is said to have been less a theorizer than Stahl and better observer of the phenomena of life and disease.

Other eminent teachers of these times were Barthez, at Montpellier, France, whose system was termed "Vitalism," Reil, of Friesland, who taught his doctrine of "Vital Force" at Halle and Berlin, and Erasmus Darwin, whose writings supported the systems of Barthez and Reil in England.

Viewed from the standpoint of modern science, the defects and incompleteness of the systems of the eighteenth century appear; but in the times of their existence, each had its part in the progress of medicine. It were better if some of the medical delusions of later times were equally meritorious.

Mesmerism.—Modern hypnotism.—Franz Anton Mesmer was born at Meersburg, on Lake Constance, in Swuabia, in 1733. He studied medicine in Vienna, under Van Sweiten and DeHaen, took his degree and commenced to practice. He studied astrology, and imagined that the stars exerted an influence on living beings on the earth. He gained some idea of electricity, and made experiments in magnetism. Mesmer and one d'Eslon had competing establishments in Paris. Their institutions were furnished with a show of machinery, tubs, connecting rods and irons, and were provided with rooms called Crisis Halls. Mesmer impressed his willing dupes by attending clad in lilac-colored clothing, by looks and gestures playing upon a harmonica, and touching his patients with his fingers or with a wand. At the "crisis" of the patient in this mesmeric hypnotic seance, she or he was taken unconscious to the crisis room. James Braid, of Manchester, England, revived the interest in animal magnetism, and in 1843 published his work entitled "Neurypnology." He first used the term "hypnotism" (from v'nvos, sleep.) The late distinguished French neurologist, Charcot. showed the hypnotic patient, and explained the phenomena of the condition in his clinic,

showing its relation to various hysterical disturbances in the nervous system.

Hahnemannism.—Samuel Christian Frederick Hahnemann, was born at Meissen, near Dresden, in 1775. He studied medicine at Leipzig and Vienna, and graduated at Erlangen, in 1778. He practiced in several places in Germany, including Dresden and Leipzig, struggled with poverty, and amid discouragements became an agnostic in medicine. He was employed to translate Cullen's Materia Medica, and became interested in chemistry. He lived at a time when theorists in medicine still predominated. In casting about for something new in therapeutics he first hit upon the old idea of similars. Hahnemann laid down three principles upon which he founded his system.

1st. "Like cures like." This was not new, and belonged to the time in the middle ages, when it was believed that the sight of a yellow bird would care jaundice because of color. This was a feature of the ancient doctrine of "Similars, Sympathies and Signatures."

2nd. The infinitesimal dilution of medicine. This he carried to so great an extent, that it could be proved that long before he got to his most potent dilution, no trace of the original chemical could be found in the substance. Various methods of shaking were prescribed in order to secure the potency.

3rd. That the psora, the itch insect, is the cause of the majority of chronic diseases.

The last two foundation principles are supposed to be the author's own discovery. Hahnemann never made autopsies, and the tendency ot the teaching of his school has been against the search for pathology as the basis of disease and its treatment. For want of better knowledge disease was regarded as something residing in the body, which must be destroyed or driven out by a specific power or remedy; all that was necessary was to have the right specific and the result was sure and complete. It is claimed that the more modern school of homœpathy is an improved edition; and that of Hahnemannism not much more than the empty word remains. If so, let the name die also, and let the teaching and the practice show the claim to be fully correct.

The success of medical delusions in modern times has been shown in certain famous methods of cure that have been resorted to, and have had their day in spite of modern civilization and culture.

In England, from back in mediaeval times to the time of Queen Anne and later, King's Evil, (scrofula) was believed to be cured by the touch of the royal hand.

The time of James the first, of England, and Lord Bacon, were the days of the weapon salve and the sympathetic powder; the first of which if applied to the weapon which had inflicted the wound, and the second applied to the blood-stained garments, either would effect a cure. if, mind you, the wound had been properly washed and bandaged.

The tar water mania of Bishop Berkeley has a place in English history. The metallic tractor man, Perkins, was an American genius who immortalized his ancestral name by the invention of Perkinism.

In view of what is now known in the science of pathology, and the practice of medicine and surgery as founded thereon, and of the fact of the higher education in natural science now available, it would seem that the time has come for the natural death of all exclusive sects, "pathies" and "isms" in medicine; but in the general out look it appears that time will yet be required. A nation may be conquered in a day; to educate a people requires time, but leads to a higher civilization.

For a much more complete account of medical vagaries old and new, the reader is referred to Oliver Wendell Holmes' "Currents and Counter-Currents in Medical Science," published in 1859, but whose contents are made of truths that cannot grow old or die.

I have used Peacock's Chionia and find it a very efficient preparation in hepatic torpor, a condition so prevalent in this region. In one case where many of the well known remedies had been in persistant use and gave little if any benefit, Chionia combined with small doses of Culvers Root placed the patient on her feet in a few weeks, and what is best of all she has had none of the troubles since.

J. C. Banta, M. D.

Abrams, Wis.

On Widal's Method of Diagnosticating Typhoid by Means of Blood Serum.

Dr. Chast Craig (New York Medical Journal, Feb. 6th, 1897,) writes concerning the new method of diagnosticating typhoid by means of Widal's reaction.

After a brief survey of the history of the development of the test, it having been the result of Pfeiffer's discovery that the blood serum of an animal previously rendered immune to the disease produces loss of activity and agglutination of the typhoid bacilli if it be added to a culture of them, he gives his method of applying it, which is as follows:

Upon a well warmed glass slide there is placed a small drop of distilled water, and with the platinum needle a very small bit of a culture of the typhoid bacilli upon agar agar is taken, and mixed with it. The specimen of dried blood from the suspected case is now moistened with distilled water and a small portion is added to the drop of culture upon the slide and a cover glass allowed to gently drop over it. The specimen is then examined with a $\frac{1}{6}$ or $\frac{1}{8}$ dry objective, the $\frac{1}{8}$ preferably. If typhoid fever is not present the bacilli will be seen to be in active motion and not grouped together. If, however, typhoid be present, in from five to fifteen minutes or longer, the bacilli will become sluggish in motion and gradually clump together, forming agglutinated masses, all movement having ceased. The culture gives the results obtained, by other observers, which are briefly as follows:

Widal obtained reaction in all cases of typhoid, and never with any other disease.

Green and Ritchie examined by this method 27 cases of typhoid, in all of which the reaction was marked.

At the Boston City Hospital the test was made in 50 cases with most satisfactory results.

Of 12 cases of typhoid examined by Bartlett, ten gave a marked reaction.

The reaction was found never to be present when normal blood was used or the blood of other disease.

Dr. Craig examined, by this method, six specimens of normal blood, in none of which was there the slightest reaction; also blood from the following diseases: Lobular pneumonia, paralysis, varicose ulcers, abscess of liver, acute amygdalitis, neurasthenia, tuberculosis, fractures, arthritis deformans, chronic laryngitis, and syphilis, in none of which was there any reaction.

Of the nine cases of suspected typhoid examined by him, eight gave the reaction, and were undoubtedly typhoid, one gave a doubtful result, and eventually developed into pneumonia. In two of the cases the result was verified by the culture of the bacillus on Elsner's method.

The author believes in the great value, from a diagnostic point, of this reaction, but points out the necessity, in mild fevers, of repeated examinations. In closing he says:

"From my own slight experience, and the published reports of others, I believe that we have in Widal's test a most valuable and easily applied method of diagnosticating typhoid fevers at an early stage of the disease."

Examination of the Blood in Typhoid Fever.

According to the British Medical Journal, R. Stern says that this examination has been followed out in two ways: (1) In regard to diminished or absent leucocytosis; and (2) the presence of typhoid bacilli in the blood. The latter succeeds best when considerable amounts of blood are used, since the bacilli are present only in small numbers. In two of the author's cases the positive results thus obtained were of considerable diagnostic value. Recently a new method has been introduced by Widal, which depends upon the action of the serum obtained from the blood of one convalescent from or ill with typhoid fever. The typhoid bacilli become less motile, and tend to adhere together when exposed to this serum. The substances producing these effects have been called agglutinin, but the author thinks that paralyisin is a better name. This agglutinative effect has been noted even on the fourth or fifth day of the disease. In the cases where it was absent at first it appeared later. The author has investigated this test in 16 cases. He has taken blood from the finger tip and added to it a bouillon suspension of the typhoid bacillus, and then separated

off the red cells by means of the centrifugal machine. When the centrifugalisation is carried out a quarter to half an hour after the mixing the characteristic reaction is more marked. The disadvantage of this procedure is that an exact quantitative estimation of the effective substances in the blood cannot be made, but the author has also used Widal's procedure. The diminished motality and agglutination were seen after a few seconds, or at any rate, within the hour. The capillary pipette belonging to Gower's hæmoglobinometer, previously sterilised, may be used for the purpose of collecting the blood. The ninth day was the earliest time that the author applied the test with success. Abundant control experiments in other diseases were made, but gave negative results except in one case of otitis, where a slight but distinct reaction was obtained in an hour. This patient had never had enteric fever. Thus the author says that for the serum diagnosis that proportion of the serum and culture must be determined which is powerless to give the reaction with the blood serum of a patient not suffering from typhoid fever. This proportion the author found in his cases to be 1 in 100, and even 1 in 2,000. Widal gives it as 1 in 60 or 80. A negative result in the early stage of the disease must not be looked upon as conclusive, but subsequent examinations must be frequently made.

Surgical Treatment of Idiocy.

In consequence of the considerable amount of attention which has been given of late years to the subject of operations undertaken for the relief of idocy and other mental deficiencies of child-life, Dr. Shuttleworth has summed up the evidence for and against the prodedure. He concludes that craniectomy is but rarely, if ever, of permanent benefit in cases of ordinary congenital microcephalus, in which the original defect is in the brain, not in the bone; but that it may possibly do good by relieving pressure symptoms and favouring brain development where premature synostosis is the result of osseous hypertrophy from constitutional causes. The diagnosis of appropriate cases is, however, beset with difficulties. In recent traumatic cases, where epileptic or irritative symptoms arise from pressure, cranial operations are clearly indicated, as also they are in cases of mental impairment with hemiplegia or athetosis occurring from intracranial hæmorrhage during parturition—the "birth-palsies." The risk, however, of the celebral defect arising from porencephalus, and not from compression by clot or false membrane, must be borne in mind. In cases of mental impairment from effusion in hydrocephalus and in tuberculous meningitis, tapping may be resorted to with advantage. In hypertrophy of the brain also trephining and section of dura mater may be beneficial in relieving undue pressure. Possibly temporary benefit may arise by similar proceedings in cases of imbecility from hereditary syphilis. The experience of Dr. Telford-Smith confirms the opinion of Dr. Shuttleworth that craniectomy is of little use, and he judges not only from the facts learned from an examination of microcephalic brains, microcephalic skulls, and of skulls in which the operation has been performed, but also from the actual mental and physical results obtained even in those cases where all the circumstances were favourable for the operation.

Oxygen in the Treatment of Diseases of the Nose.

The method of applying oxygen in the treatment of ulcers and various diseases has recently been described by George Stoker, who devised the method about two years ago. In treating nasal affections he fills the bags, containing about one cubic foot, with equal parts of oxygen and pure air. The nose piece is passed into one nostril, the other nostril being plugged with cotton wool; the patient is directed to breathe through the mouth, the taps are turned on, and the treatment is begun. In ear cases the only difference is that the terminal piece is placed in the external auditory meatus, and in case of either ears or nose it is desirable to have several different sized terminals to fit different sized orifices. The oxygen should be allowed to pass into either the nose or ear from three to six hours daily. In nose cases it is best to use it about half an hour to an hour at a time, giving intervals of rest between the times. If

used for more than an hour in nose cases it is apt to cause headache. The only additional treatment is using warm water to cleanse the parts during the day; the necessity for doing so seldom or often will, of course, depend on the amount of the discharge, but it must not be done less than twice daily.

He reports the notes of four cases, *i. e.*, two of "ozœna" and two of "suppurative middle-ear disease." These are typically bad cases, and seem to amply illustrate the results of the treatment.

Cancer of the Breast.

We find in the New Orleans Medical and Surgical Journal a paper on "Cancer of the Breast," by Dr. L. L. Hill, of Montgomery, Alabama.

After stating that before the end of the 18th Century, the pathology of tumors was not even dimly comprehended, he reviewed tersely the progress that was made from the time of John Hunter to Cohnheim.

He repudiated the theory of the Microbic origin of Carcinoma, because its advocates failed to "demonstrate the same micro-organisms in every cancerous growth." And were unable "to cultivate the carcinoma microbe, ab extra, upon an artificial, nutrient medium, and by inoculation reproduce the disease."

He held that the great majority of Cancers of the Breast had their commencement in the acini: Only about six per cent. beginning in the epithelial cells of the lacteal ducts.

He stated there was no impairment of the patient's general health, nor pain for the first fourteen months. Tegumentary contamination caused the sharp, lancinating pain in Cancer of the Breast. Six months later ulceration commences by formation of a fissure. The colloid variety of spheroidal celled carcinoma was found to be much less malignant than the scirrhus, or encaphaloid—the patient usually living about 12 years. The duct variety of cancer is found usually in old women, and is less malignant than the acinous.

In speaking of the differential diagnosis between carcinoma and chronic mastitis, he dwelt upon the absence of pain and tenderness in the early stages of cancer. The presence of extreme hardness and dimpling of the skin in cancer. Inflammatory tumors commencing during lactation, and cancer about the menopause.

In tuberculosis the breast is contaminated in a number of places, but not so in cancer. Sarcoma increases more rapidly than scirrhus, and may occur at any age. Axillary lymphatics usually escape infection.

Exploratory incision to secure a specimen for microscopical examination was recommended in some cases.

Of one thousand eight hundred and seventy-nine cases of mammary cancer, collected by Williams, only sixteen were found in the male. Bryant found it four times as frequent among multipara, as among nullipara.

Dr. Hill said, patients not operated upon live usually three (3) years. Where they were operated upon, about four (4) years.

Professor Dennis claims to have permanently relieved 25 per cent. His experience has not been duplicated. The older the patient the less malignant the neoplasm. Relapses occur within three (3) months after the operation in 82 per cent. of cases. Mortality from operation about six per cent.

Early and thorough use of the knife was recommended. Injections of the sterilized toxins of the streptococcus of erysipelas was condemned in operable cases. Caustics were advised against.

If the patient is over 70 years of age, or the glands in the posterior cervical triangle can be felt, or internal organs are contaminated, or there exists extensive infection of the lymphatics of the skin, an operation is not to be considered. In inoperable cases it is the duty of the surgeon to protect the skin as long as possible, to prevent contamination by pathogenic micro-organisms, and if ulceration has occurred, for the same reason antiseptics must be freely used. Where a radical operation is performed every antiseptic precaution should be taken, and the malignant growth removed in its entirety. He especially recommended thorough removal of the axillary glands. The wound, he said, should be packed with iodoform gauze, so as to remove the oozing for the first three days, and the sutures, which were placed in position at the time of the operation, be tried on its removal. Stiles' test was condemned.

The Present Status of Surgery of the Kidney.

Obalinski has come to the following conclusions in reference to the surgery of the kidney;

1. The most frequent symptoms—*i. e.*, enlargement and displacement of the kidney—show us which kidney is affected. When there is hæmaturia, it is only in exceptional cases that this cannot be decided, and here only an examination of the bladder with the cystoscope will prove from which ureter the blood or pus flows.

2. It is only in distinct and developed cases of affections of the kidneys that we can fully make out a diagnosis and the consequent therapeutic indications by external examination only; most frequently, especially in the beginning, we must have recourse to exposure of the kidney or even incision of the same. If there is difficulty in deciding whether the kidney or some other organ (gall-bladder, for instance) is affected, it is necessary in grave and urgent cases to decide the question by laparotomy. Where, however, we are sure that the kidney is affected, and the only question is the severity of the affection, we should expose the kidney by an extraperitoneal incision.

3. Today the conservative tendency, prevails, and our endeavors are to preserve as much as possible such an important organ as the kidney. We only sacrifice it, therefore, when we have concluded that it contains within itself a focus that may be injurious to the remainder of the organism, or when the parenchyma has become so degenerated that its function is rendered impossible. Thus, there are only two absolute indications for nephrectomy—namely, when in the greatly enlarged kidney a malignant growth or primary tuberculosis are positively diagnosed. The other indications will be only relative—that is to say, will have their significance only when, after exposing the kidney or even after its incision, we have convinced ourselves of its useless function.

4. The experience so far gained by the practice of nephrectomy teaches us that when a considerably enlarged and hard kidney can be felt before the operation, it is already or almost deprived of its natural function, and is also usually a proof of the capacity of the other kidney to perform the functions of both.

5. In view of this and the frequently demonstrated fact that even a seriously affected kidney, remaining after the extirpation of the other, may fulfill the functions of both, the requirement of an examination of the urine of each kidney separately should be considered as unnecessary and as impeding the development of surgery of the kidney. This is especially the case since Sawlik's method of catheterization of the ureters (the only one known and employed) is troublesome and unreliable, and may even be dangerous in some cases—namely, if there are morbid microbes in the bladder, which are transferred by the catheter into the ureters or even the renal calices.

6. When, in the kidney to be operated upon, we suspect that there is still a certain functional capacity, we should never sacrifice it, but act conservatively and resort to nephrotomy, which best facilitates the examination of the condition of the other kidney.

Experimental Eclampsia.

Van de Velde, says the British Medical Journal, seeks to give the auto-intoxication theory of eclampsia an experimental basis. He began by comparing the case with which the injection of human urine induces convulsions in pregnant and non-pregnant rabbits, finding that the average dose required is in the former case 9 c.cm. per kilog. of body weight, in the latter 20 c.cm. per kilog. In only 1 out of 37 pregnant animals experimented upon was there any difficulty in evoking convulsions. The causes of this increased susceptibility may be two in number: the presence of a greater proportion of the toxins producing convulsions in the blood of pregnant animals or a greater vulnerability of their nerve centres to these toxins. Now the author finds that if the blood of a gravid and non-gravid animal be injected at different times into the same rabbit, 18 c.cm. per kilog. of the former induce eclampsia as against 25 c.cm. per kilog. of the latter. If urine be substituted for blood, the figures are 18 and 30 c.cm. per kilog. The author concludes from these experiments that pregnancy leads to the formation in the female organism of substances whose

principal action is the causation of convulsions, that these substances are normally eliminated by the urine, and that they circulate in the blood to a greater extent in pregnant than in normal animals, indicating in the former an excess of production over excretion. He further finds evidence of the increased susceptibility of the nerve centres during pregnancy, in that for some days after delivery the animal is more easily convulsed by the injection of blood or urine than the normal, although its own urine is no longer abnormally toxic. Van de Velde hence argues out the whole question of clampsia, finally accepting Bouchard's views as to its cause being auto-intoxication by the accumulation in the blood of the "toxins of pregnancy."

Treatment of Varicocele.

Dardignac's operation for the cure of varicocele is a modification of the well-known operation of Henry, of shortening the scrotum. Instead of applying his compressors longitudinally, they are applied laterally. The lower portion of the scrotum is spread out laterally, and each half compressed from the side to the medtan raphê by a long forceps. These forceps have attached to them an additional blade or guard running parallel to the other two and a short distance from them. Numerous sutures of silkworm gut are then passed by means of a Reverdin or other needle close to the jaws of the forceps and between them and the guard. Without loosening the forceps the redundant scrotum is cut away beyond the guard. This latter is then removed, thus leaving a considerable portion of tissue, through which the sutures pass, projecting beyond the forceps. These sutures are then all tied and the clamp removed. The same procedure is carried out on the opposite side. Thus, on the removal of the forceps there is no bleeding, and the operation is practically bloodless. The sutures are placed close together, two to the centimetre. A line of sutures is thus left, which extends transversely from one side of the scrotum to the other, and situated well down towards the perinæum. This operation he prefers to the excision of a longitudinal strip or to excision of the veins as does Bennett.

A Century of Vaccination.

The British Medical Journal sums up the result of vaccination of the past century and they are certainly very interesting. It was on May 14th, 1796. that Jenner performed his first successful vaccination. The average mortality from small-pox in Europe during the century preceding vaccination was, in the cities alone, 3,000 per 1,000,000 inhabitants; including the country parts, it was somewhat over 2,000 per 1,000,000 inhabitants. Owing to frequent epidemics of small-pox the mortality rose occasionally to between 5,000 and 6,000 per 1,000,000 inhabitants. In the century since vaccination, the mortality from small-pox has not been one-tenth of that figure, as we shall see by taking statistics from individual countries.

In England the mortality rate was over 2,000 per 1,000,000 in the last century; during permissive vaccination the rate fell to 416 per 1,000,000, and during compulsory vaccination from 1871, the mean rate has fallen to 53. The distance from a mean anti-vaccination mortality rate of 2,000 to a mean compulsory vaccination rate of 53 is a long distance!

In Sweden, the quarter century preceding vaccination, the mean mortality rate from small-pox was 2,045 per 1,000,000 inhabitants. During the fifteen years 1802-16 of permissive vaccination, the rate fell to 480; and during seventy-seven years (1817-94) of compulsory vaccination it fell to 155. This is not as good a result as in England; but still it is a material tumble from the ante-vaccination death-rate of 2,045 per 1,000,000 inhabitants to the compulsory vaccination death-rate of 155! Prussia furnishes the finest example of immunity from small-pox through rigorous vaccination. Her ante-vaccination mean death-rate from small-pox was over 2,000; during the permissive period it fell to 309; and during the compulsory period since 1874, the mean rate has been only 15 per 1,000,000 inhabitants! Italy during the permissive period had a mean death-rate from small-pox of 440; during the later compulsory period the rate has fallen to 110. Austria and Belgium practice vaccination, not by compulsion; and in the former the mean rate is 580, and in the latter 441. Spain does not practice vaccination generally, and her death-rate from small-pox in the

single year 1889 was, in these provinces: —Almeria, 3,080; Murcia, 2,670; Carunna, 1,230; Malaga, 1,330; Cadiz, 1,330; Cordova, 1,400. In Germany that same year the death-rate from small-pox was 4.

The Treatment of Umbilical Hernia.

Sebileau divides umbilical hernia into three groups: (1) Hernia neonatorum: This either (*a*) contains most of the viscera, and is a condition incompatible with life, or (*b*) is smaller and covered with a thin layer formed by the amnion, if arising in the embryonic period, or by a double layer of skin and peritoneum if formed during fœtal life. The operation which should be performed in these cases differs from that in the adult only in the ligature of the umbilical vessels and cord. (*c*) It may be quite small, when it should be treated as group (2). Hernia in children must be treated according as it occurs (*a*) in infants who cry, cannot walk, but soil their clothes (1 to 15 months); (*b*) in those who seldom cry, can walk, and are clean (2 to 8 years); (*c*) in older children. For group (*a*) no treatment is needed as a rule, as most are cured spontaneously. If anything is needed a four-shilling piece wrapped in cotton wool and kept over the umbilicus by crossed pieces of strapping is best. Nothing is worse than the common spherical apparatus, which penetrates the ring and prevents natural cicatrisation. In group (*b*) everything must be tried to cure the hernia, but operation is seldom justifiable. All ordinary bandages applied by the mother are useless. The best apparatus is that of Fournier des Lempdès. It consists of a piece of aluminium moulded to the subjacent musculo-aponeurotic layer, and therefore hollowed out to allow the recti free play, and having a semicylindrical projection fitting into the linea alba, but interrupted at the aperture of the ring so as to allow of its closing. This plate is kept in place by a flat band of elastic attached to its sides and passing behind the body. The hernia cannot escape unless the child retracts the recti voluntarily, and this he must be taught not to do. In group (*c*) cure cannot be expected, and although an apparatus may be tried, the necessity of operation must be considered. (3) Hernia in Adults: There are two well-defined classes of cases—(*a*) when the surgeon is forced to operate by the occurrence of acute complications (strangulation, etc.), and (*b*) when no acute complication is present. Here the only contra-indications are those of general health, such as obesity and emphysema, especially in old age, and advanced diabetes. In every other case radical cure ought to be advised, and in such as have shown signs of obstruction previously be insisted on. If no operation is done a truss such as that of F. de Lempdès should be worn if the hernia is reducible and can be kept in place, but if this is impossible it is better to leave it alone altogether. Operation: (*a*) Radical cure for a reducible hernia in a young subject is simple. The sac is dissected out and cut off at the neck, and the abdominal wound closed. (*b*) Radical cure with omphalectomy: With old-standing herniæ containing omentum, and with a very large ring, the operation is more difficult, chiefly owing to adhesions. First, a very long incision must be made through the skin, taking care not to wound the sac, The latter must then be opened freely, adhesions separated, the omentum resected, and the intestine returned. Two large curved incisions are then made on either side of the ring through the skin and the sac adherent to it; the fibromuscular layer is well exposed, and the umbilical ring resected. To close the wound an incision is made rather more than an inch from the margin in the sheath of the recti. The deepest layer of sutures unites from right to left, the peritoneum and the deep layer of the sheath of the recti, the middle layer unites the muscles and superficial layer of the sheath, and the superficial layer of sutures unites the skin. This method gives a veay firm cicatrix.

*Abstract from the British Medical Journal.

Breast Excision for Malignant Disease.

From an experience of 300 cases of breast excision for malignant disease, during a period of twenty years, Dr. Herbert Snow in the British Medical Journal, concludes that infection of the bone-marrow is the great obstacle to radical cure by operation in mammary carcinoma.

This takes place in all ordinary cases, within six months of inception, frequently earlier; its symptoms do not appear until within the second year; they may not be accompanied by nodular deposit or other palpable evidence of cancer for five to six years more. In the class of cases known as "atrophid," the condition may be delayed for several years.

Hence, these latter excepted, apparent immunity from "recurrence" for three years is wholly inadequate basis on which to pronounce the disease radically extirpated, unless insidious marrow symptoms are also excluded by careful examination, and unless there is good reason to believe that evcision has been performed before the marrow has become implicrted. The most important practical point in excision of the female breast is a wide dissection of the subcutaneous connective tissue around the diseased organ, from sternum to axilla, from the subclavian fossa to the cartilage of she seventh rib. This tissue is the really dangerous tract to be feared as nidus for recurrence, not prolongations of the mammmary parenchyma. But it can always be adeqnately extirpated by dissecting off a flap of healthy skin, and so bringing the edges to immediate union without undue ten sion.

No advantage whatever is gained by the destruction of an extensive skin tract. In every single instance seen by the author the utmost benefit that surgery could confer was perfectly compatible with the union of the greater part of the wound by first intention. Should the skin be infiltrated, no amount of ablation will avail to prevent reappearance, previously insured by the marrow condition. If we encounter instances of scirrhus, or even of encephaloid (acute) carcinoma, of but two to three months' duration, no pains should be spared to eradicate permanently the disease by dissecting out the entire mamma, a wide area of subcutaneous tissue around, and the contents of the axilla; and at least one and a half hours should be devoted to that purpose. On the other hand, in advanced cases of longstanding, it is futile to risk life by prolonged and heroic measures. when we know there is a deep-seated nidus which we cannot touch. The utmost advantage we can attain is removal of the gross lesions without risk; prompt union of the wound; and then by after-treatment with opium and cocaine, to procure a state in which the disease remains, stationary for years or advances with almost imperceptible slowness.

The Pathology and Bacteriology of Typhoid Fever.

Simon Flexner at a recent meeting of the Medical Cherurgical Society of Maryland stated that, while we have every reason to believe that the disease comes from the germ—the bacillus—in the anatomical tract, there is no ground for believing that it gets into the body in any other way than through the intestines. This fact is based not only on the pathological anatomy, but on experiments as well; we cannot produce the disease in animals. Not all parts of the intestines are alike prone to infection to the same extent. Infection takes place where the lymphatic follicles are in aggregation, but not all the lymphatic aggregations are affected to the same extent. There is a general distribution of these lymphatic follicles throughout the whole tract of the intestines, but not all are affected in typhoid fever. The agminated glands are more susceptible to the poison than the solitary ones, and those nearer the lower part of the small intestine are especially affected. Here the infectious material of typhoid fever is kept a long time, owing to the anatomical character of the parts. The ulceration produced by the bacilli may be very superficial, affecting only the mucous membrane, or the whole thickness of the intestinal coats may be affected, causing perforation.

Many epidemics are from an infected water-supply. The organism of this disease is not particular as to where it livss, and can thrive in water a long time, as well as in milk. It is difficult to discover and separate it from other organisms. The growth is often invisible and causes no change in the color or taste of the milk infected, nor does it cause coagulation. This fact helps in its recognition, because the organisms with which it is confused grow visibly and recent methods allow the typhoid germ to be discovered in the intestines. By the use of the differentiation method of Elsner in

culture-media of varying acidities, the growth of the typhoid organism in plate culture may easily be separated.

The method of Pfeiffer and Widal, by which the disease is diagnosticated in its early stages, is very ingenious. A bouillon culture of typhoid germs is mixed with blood from a suspected case of typhoid. If the disease really exist, the effect of the serum from the typhoid case causes a loss of motility, a clinging together, and, finally, a disintegration of the organisms. Wyatt Johnston has been able to make a diagnosis of typhoid fever in many ceses in a short time by means of a hanging drop of a pure culture of the typhoid organisms to which serum from a typhoid patient has been added. This is a great advance in our diagnostic methods, and should be made use of by all physicians.

The Serum Test of Widal and the Possibility of its Application Without Microscopical Examination.

Greene, in the Medical Record expresses the opinion that this test is absolutely pathognomonic, whether performed with fresh or with dried blood. In support of this view he cites a series of cases, and calls attention to the fact, not hitherto mentioned, that even macroscopical methods may suffice for its application.

Pfeiffer, in May, 1894, found that cholera vibrios, mixed with the serum of an immune animal and injected into the peritoneal cavity of a guinea-pig, lost their motility and underwent a peculiar change in physical characteristics. In November, 1894, he found that typhoid bacilli underwent similar changes, and he also found that the blood.serum of a typhoid fever patient would produce the same results. Gruber, in 1895, found that if the serum of an immune animal were added to a bouillon culture the bacilli became agglutinated and lost their mobility. No use was made of these discoveries, however, save as a means of identifying the bacillus, and to Widal, of Paris, belongs the credit of transposing these findings and adapting them to the needs of clinical diagnosis by studying the effect of the blood-serum of a typhoid patient upon the pure culture of the bacillus typhosus.

He first reported his clinical results on June 26, 1896, and later suggested the use of dried blood instead of the fresh serum, when the latter could not easily be procured. The present status of the test justifies the following statements:

(*a*) That the blood or blood-serum, and very frequently the urine, of a typhoid patient, by virtue of a specific antitoxin, causes, when added to an emulsion of the pure culture of Eberth's bacillus in hanging-drop or ordinary cover-glass preparations, a characteristic loss of motility, with agglutination and grouping, of the bacilli.

(*b*) That this reaction may, and generally does, occur as early as the fourth or fifth day and is variable on the eighth or ninth, lasting generally throughout convalescence, and very often for many months after complete recovery. (Widal thinks for years in some cases.)

(*c*) That the antitoxin of a typhoid patient acts thus only upon the bacillus of typhoid. (This has been denied as to the colon bacillus, but the denial is immaterial from a clinical stand-point.)

(*d*) That the blood serum or urine of patients suffering from diseases other than typhoid does not so affect the typhoid bacilli.

(*e*) That dried blood retains the antitoxin unchanged and may be used when the fresh blood or serum is unobtainable. The antitoxin remains unchanged in dried specimens for weeks, and probably for several months.

(*f*) That the test is, therefore, pathognomonic of typhoid and easily applicable to the use of public laboratories.

The fact that no adverse reports appeared attests the simplicity and reliability of the test. Its application requires only the possession of a moderatcly-high power lens,—¼ to ⅙ objective (an immersion objectivc is not necessary); a tube containing the pnre culture, such as may be easily obtained from a public laboratory; and such a rudimentary knowledge of bacteriological technique as will serve to prevent the contamination of the pure culture used and permit proper re-inoculation of fresh culture tubes from time to time (about every two weeks.) For such as do not possess these facilities the public laboratories should offer a means of ready assistance. The practitioner would then need only to sterilize the skin of his

patient's finger or ear, draw a drop or two of blood, transfer it to a cover-glass, visiting card, or any other similar object, and send it closely sealed to the laboratory.

The Present Position of Serum Therapeutics.*

At a meeting of the Plymouth Medical Society held on January 28th, Dr. Webber read a paper on the Present Position of Serum Therapeutics. After a brief consideration of the history and principles of serum treatment and the methods of preparation of the antitoxin serums Dr. Webber discussed the results of the treatment in several of the diseases to which it has been applied.

(*a*) In diphtheria its success was held to be firmly established. The statistics of Goodall, Von Ranke, Baginsky, Welch, and the committee of the American Pædiatric Society, showing an average death rate under the treatment of 17.1 per cent. were compared with the average death-rate under former methods of treatment, estimated at 40.6 per cent. Having considered the beneficial influence of the injections on the clinical course and complications of diphtheria, the effect of the antitoxin on the kidneys was examined, and having regard to the small number of cases in which nephritis (as shown by the presence of blood and casts in the urine) had been recorded while under the treatment, and to the fact that it was frequently doubtful whether such nephritit was really caused by the serum or was due to the diphtheritic process itself, it was held that such occasional and uncertain evidence of harmful effect of the serum should not be allowed to militate against its general use.

(*b*) In tetanus the results were not found to be so satisfactory. After allusion to the statistics published by Kanthack and by Hewlett, Dr. Webber examined the reports of twenty four cases of antitoxic treatment of tetanus recently published. Of these he found that twelve recovered and twelve died, and confirmed the deductions of Kanthack, that the beneficial effects of serum injections were more frequently observed in the chronic cases with long incubation period than in those with short incubation and rapid onset of spasms. Dr. Webber referred to the strong immunising power of tetanus antitoxin when used as a prophylactic agent and its successful use in this manner in veterinary practice, and concluded that the serum treatment of tetanus, though not so successful as could be wished, still deserved an extension of trial.

(*c*) The results of injectinos of anti-streptococcic serum in pyogenic affections were next considered, and a brief account of the cases reported up to the present were given. It was held that the successful results published in several of the cases, notably in puerperal septicæmia, urged the continuance of its use.

(*d*) The treatment of inoperable malignant diseases by injections of the mixed toxins of streptoccoccus erysipelatis and bacillus prodigiosus was reviewed, with special reference to Coley's work and to his publication of 160 cases treated by this method. Though the constitutional effects on the patients were shown in many cases to be severe (rigors, pyrexia, and emaciation being often, and even a fatal result occasionally, observed), yet in view of the desperate nature of the diseases to which it was applied a further trial of the method was recommended,

(*e*) The results of the injection of Maragliano's anti-tuberculous serum as published abroad were discussed, and, having regard to the encouraging statistics recorded by him, it was hoped that the method would receive a share of attention in this coutry.

*Abstract from British Medical Journal.

Tracheotomy.

Cameron, (British Medical Journal,) believes that the greatest factor in insuring success for the relief of asphyxia during diphtheria is in early operative interference. It is better to open the trachea in an occasional case, which might possibly reach convalescence without such interference, than run the risk of losing lives by unnecessary delay. The respiratory difficulties may occur at almost any time, and when the surgeon is called upon to operate after the disease has been in existence for ten days, or even longer, there is much more hope than when interference is forced upon him at an earlier period. The reason is that in one case

convalescence from the diphtheria has already commenced. When called for in the early onset of diphtheria, the operative wound seems to favor the occurence of serious complications which are likely to be escaped if the operation is not required until the disease is somewhat spent. One of the complications of the operation is hemorrhage. To guard against this it is necessary to attend principally to three points: (1) make the incision scrupulously in the middle line; (2) make no attempt to open the trachea until its rings are visible, or felt with the forefinger of the left hand to be quite exposed and bare; (3) be careful, especially if performing the low operation, to make the deep discection correspond as much as possible with the centre of the original wound. Secondary hemorrhage has usually been due to ulceration into the innominate vein or artery. This has, as a rule, been attributed to an ill-fitting tube, but the accident, so far as the author knows, has usually been due to a poor general state of the patient, the pressure of the instrument being only a secondary ause. Emphysema is another accident, and is most often the result of faulty operating, the wound in the trachea not corresponding in situation with that in the skin and fat. Prolapse of the thymus glands into the wound is easily reduced by the pressure of a forefinger. Fluids which are swallowed sometimes escape from the tube In these cases it is unnecessary to feed the child by a tube passed through the nose, as it will have no difficulty in swallowing semi-fluid food, such as milk in the form of curd, meat, jellies, etc. The most serious complications are those of extension of the membranous exudation to the lower part of the trachea, to the bronchi, and even sometimes to the wound, and cervical cellulitis and edema with more or less septicemia. Faulty operating may to some extent favor their occurrence, if the intermuscular spaces and loose cellular tissue of the neck be unnecessarily freely opened up. They may depend upon the original severity of the case.

Diet in Sickness.

Whilst it must be admitted that a great deal has been, is still, and will in the future continue to be said upon the subject of feeding the sick, there is one simple proposition which has not been sufficiently emphasised. This is, that it is far better to give no food at all during suspension of the digestive functions than to cram down food with the irrational hope that when it is inside the patient it is in the patient. A beefsteak or a cup of milk in an incapacitated stomach yield no nourishment, for they are neither digested nor absorbed, but lie there, foreign bodies in an ill organ, causing irritation and its train of sequelæ. The same beefsteak laid upon the external integument, while of no benefit to the patient, would at least not cause the same irritative disturbance.

It is safe to lay down the general rule that in acute cases of asthenic or strong type, food should not be given in any form until it is craved, even though none be administered for four or five days. Many acute gastric disturbances disappear after twenty-four hours' abstention from food. Many persons overfeed and thus block their own eliminative organs with waste material quicker than it can be thrown off. Hearty feeding is notoriously prone to disincline one to any kind of exertion, thus cutting off the very best means of effecting thorough elimination.

We would not be understood as advocating a starvation pian of treating the ill and well. By no means. There are many cases that must be well fed from the beginniag of their illness, becnuse they need it. Such are acute asthenics and chronic cases.

Probably one of the best guides to feeding, in a large proportion of cases, is the desire of the patient, but, of course, not in all. Just as an otherwise well person after long fasting will lose all appetite and have only a feeling of general weakness, so also will many ill persons lose all desire for food, however great may be their need of it. It is here that the discriminating judgment of the physician comes into play. A well-acting heart, a good pulse, is a fair index that the patient may safely go without food or with a minimum allowance, as his appetite or its absence may dictate. There is no sense in feeding a patient on the one hand whilst depletory remedies are being used to counteract the stimulating effect of food.

It has often seemed to us that the heavily-coated tongue and nausa at the inception of acute asthenic disease was Nature's mute command to supply no more nourishment until the system required it, and had adapted itself to its change into blood. We have aborted many incipient "bilious attacks" and acute dypepsias by total abstention from food for twenty-four hours, using, however, during this time, coplous draughts of water to favour elimination—to flush the body.

Enuresis in Young Children.

Williams in the Boston Medical and Surgical Journal, reports sixty-two cases of nocturnal enuresis. Of these thirty-four were girls, and twenty-eight were boys. The ages ranged from two to fifteen years, the greatest number occurring at seven years. Cases were distributed so evenly, however, that age did not seem to be an important factor.

In 13 of the cases a definite cause of reflex irritation was detected and corrected, in 12 with a cessation of the enuresis. These causes were as follows: Adherent prepuce, four cases; vulvo-vaginitis, with gonococci, one case; oxyuris vermicularies, five cases; chronic ileo-colitis, one case; prolapse of the rectum, one case. A condition of anæmia and neurotic temperament and history were noticed in a large but unrecorded number of the children. A balance of forty-nine cases remain in which the cause is unexplained.

Dr. Williams regards the incontinence of urine in children as a true neurosis, and, like other neuroses in children, as made up of "a tripod of etiological factors, namely, (1) irritable and unstable nerve centres, (2) anæmia with consequent malnutrition, (3) reflex stimulation of certain nerve centres in the lumbar cord," "There are three important etiological factors of incontinence of urine in children, namely: First, excitability of the nerve centres produced by heredity and age; second, anæmia or mal-nutrition, increasing the excitability of the nerve centres; third, reflex irritation. These factors are interdependent and act together in producing this condition-"

The author is disposed, however, to emphasize more strongly than Dr. Rachford has done another factor, namely, the control which is exerted by the higher over the lower centres—the influence exerted by the brain. Pursuing the method of Dr. Rachford, he states that according to Coulton, there are fibres in the columns of the cord connecting the lumbar centres through the cerebral peduncle with the brain, and through these fibres the influence of the brain is felt; this being the mechanism of the familiar fact that after the first year of life the act of urination is largely governed by the will.

To the three etiological factors of Rachford's, which he slightly modifies, he adds those cases of enuresis caused, at least in part, by

(*a*) Direct volition.
(*b*) Auto-suggestion.
(*c*) Retarded mental development.
(*d*) Enfeeblement of the will.

All cases of enuresis must, therefore, be divided into two classes:

1. Those of local organic origin, such as malformations, etc., and

2. Those of functional origin, in which the function of the bladder is interfered with in consequence of functional or organic disease of other organs.

These cases of functional origin he regards as due to seven factors, one or more of which are probably present in every case.

(*a*) Under excitability of the spinal centres is a factor which is probably present in a large majority of cases. It is, therefore, of importance to make careful inquiry into such possible causes as may augment the condition; namely, stimulating articles of diet such as strongly albuminous food, tea, coffee, condiments and spices. Hygienic causes, such as sleeping on the back, stimulating plays, and the bad practice of tickling children must be thought of. Vicious habits.

(*b*) The author agrees with Dr. Rachford that anæmia is a most important factor. He is not, however, inclined to attribute so much to this cause.

(*c*) Reflex irritation is an important causative factor, such causes being detected in 13 out of the 62 cases. But it must be remembered that it is only a factor; not all cases of adherent prepuce, prolapse of the rectum, distension of the bladder, etc., lead to enuresis, and the physician must not be satisfied by removing this cause alone.

(*d*) Direct volition is a factor which must be regarded as present in some cases. The child shows unwillingness to rouse itself sufficiently, because it is afraid of the dark, because it is cold, or for some similar reason, preferring to wet the bed to subjecting itself to the discomfort of getting out of it. Or it may be an act of direct wilfulness.

(*e*) Auto-suggestion also seems to play an important role in some of the author's cases, The habit once instituted is continued through this cause, apprehension being an important factor.

(*f*) Of retarded mental development nothing need be said. It is merely ne cessary to bear in mind that the nerve supply of the bladder is only slightly developed during the first one or two years of life, and that this condition may persist longer through retarded development.

(*g*) Enfeeblement of the will is a factor of more serious importance and of more frequent occurrence than is probably generally recognized. Inhibitary impulses are conveyed from the brain to the spinal centres, and these restraining impulses are undoubtedly operative during sleep. Any cause which may lead to enfeeblement of these centres may lead to nocturnal incontinence, in which case it may be a symptom of grave import— a warning note, which if properly interpreted, may enable us to inaugurate such a system of hygienic education as will ward off some of the neurasthenias and hysterias of adult life.

Differential Diagnosis made by Blood Analyses.

There appeared in a late issue of the Louisville Medical Monthly an article by Dr. Solomon, on "The Analysis of Blood" in which the plea is made for more frequent Blood Examinations. The point taken by the writer is that blood work should go hand in hand with urine and sputum analysis. It seems that the profession attach too little importance to blood analysis and are satisfied that they have done their full duty, when the urine and sputum have been subjected to chemical tests and microscopical inspection. As a matter of fact the changes, which take place in the blood, are much more manifest and occur sooner than is the case with either urine or sputum, and if we stop to consider the question a moment, it is readily understood why such is true.

Dr. Solomon writes:—"The blood is being constantly acted upon by changes, which are as constantly taking place in the animal organism. If the animal be in the enjoyment of perfect health, these changes are nevertheless taking place and are manifesting their effect and influence on the blood. Food is being consumed by the animal and elaborated into the elements, which go to make new blood. Again, metabolic changes are constantly at work, and are ever using up these new blood elements in the unceasing cycle, which constitutes life. If there be disease, and it matters not particularly what the exact nature of the malady is, so soon as the normal equilibrium, which we call health, is disturbed, nutrition suffers and the blood becomes abnormal."

Can any one deny the truthfulness of these statements? They are not mere theory. They are absolute facts and we must acknowledge the writers point as well taken. Among other differential Diagnoses, considered in the article, are: Typhoid from Malaria.

In the former, strange to say, the microscope shows no *leucocytosis*. The leucocytes are normal, in the beginning of an attack of typhoid, and gradually decrease in number. There may be a relative lymphocytosis. Not until late in the diserse, when associated with the process of advanced ulceration, there is often decided enteritis, will the leucocytes become normal in number.

What does the blood show in malaria? Careful and painstaking search should reveal the plasmodium of Leweran, or at least some so-called "Half-moons" or "Copulation Forms" (spoies) of the malarial organism. If they cannot be found, the *leucocytosis*, surely will not be overlooked and you will have satisfied yourself that a case of malaria was not an incipient typhoid.

In regard to a Differential Diagnosis between tubercular meningitis and simple meningitis, the examination of the blood is of undoubted advantage. Tubercular meningitis will run its course with absolutely no leucocytosis, while simple

meningitis shows invariably a considerable leucocytosis. The same statement holds good for Tubercular Pleuritis in contradistinction to simple pleuritis, and as soon as the effusion of a simple pleurisy becomes purulent, the leucocytosis becomes enormous.

With reference to pneumonia, the statement is made that the prognosis depends largely upon the leucocytosis. If there is a considerable leucocytosis, the chances of recovery are better than if the leucocytosis is small. Furthermore the physician who examines the blood of the pneumonic patient often, can foresee the comming crisis, by the appearance in the blood, a short while before, of eosinophile cells. These cells remain in the blood, then, and are always present after crisis. If the patients temperature drops suddenly, but the cover glass shows no "post critical" eosinophile cells, then we can look for a future rise of temperature, and count the fall, which the thermometer indicated, as a Pseudo-crisis. Dr. Solomon prefers the Eosin-Hæmatoxylon stain (Ehrlich) as affoading the clearest pictures for blood work. The stain is prepared as follows:

Hæmatoxylon	gr. xv.
Alcohol Absol.	℥i.
Glycerine	℥i.
Aq. Destil.	℥i.
Ac. Acetic (Glac.)	♏iss.
Alum q. s. ad Saturation.	

The solution should be subjected to the light for about three weeks, then filtered one per cent. of eosin added. After about six months it decomposes, turns red, and is unfit for further use.

The Management of Pneumonia.

At a recent meeting of the New York Academy of Medicine, Dr. Falsome said that while the death-rate from typhoid fever had been diminishing, the mortality of pneumonia had been ever on the increase. He felt convinced that pneumonia should be treated by boards of health and by the medical profession as an infectious disease. He had used the cold bath in thirty six pneumonia cases in the Boston City Hospital. The baths were given very much as in typhoid fever, although they were not kept up so long, the duration generally being about ten minutes. Of the thirty-six cases, twenty-eight recovered and eight died, giving a mortality of 22.2 per cent. In the same hospital there had been treated 355 cases of croupous pneumonia, with a mortality of 34.9 per cent., and this was about the average death-rate at that hospital. Of his eight fatal cases, one had typhoid fever also, one had pleurisy, three had chronic alcoholism, one had general diplococcus infection (endocarditis, pericarditis, and meningitis), one had chronic nephritis, and one had phthisis. Excluding the case of phthisis, dying on the thirty-first day, and the case of chronic nephritis, dying on the second day, in both of which there was only an intercurrent pneumonia, which simply hastened death, the total number of cases was thirty-four, and the mortality was 17.6 per cent. From close observation of these cases it had seemed to him that the cold bath treatment offered better chances of recovery, even in desperate cases. In all but one of these cases he had been compelled to use alcoholic stimulants on account of the severity of the symptoms. In every instance it was found that the bath was grateful to the patient, which was in marked contrast to his experience in typhoid fever. In a considerable number of cases no medicines were used except laxatives. He knew of no therapeutic agent which gave so much comfort to the patient as the moderately cool bath; it moderated the fever, lessened the cough, dimished rest lessness and delirium, and induced sleep.

The Theory of Nephritic Origin of Puerperal Eclampsia.

In a paper read by Dr. Norman W. Bellrose of Eaton, Colorado, at the annual meeting of the Colorado State Medical Society held in Denver, June 16 to 18, 1896, and later published with a second report in the Journal of the American Medical Association, January 16, 1897.

The theory of nephritic origin of puerperal eclampsia is denied and the toxenin theory is upheld. In support of the latter theory Dr. Bellrose reports a case of puerperal eclampsia in which the patient had twenty-seven convulsions—epileptic in character. The urine contained only one fourth in volumn of albumin, which disappeared on the tenth

day after delivery. The nephritis symptoms entirely "was not in proportion to the gravity of the eclamptic manifestations."

He does not deny that the kidneys plays an important part in the etiology of eclampsia, but states that "they and possibly the liver, lungs and skin in eclamptic cases, fail to accomadate themselves to the extra work that the pregnant state requires of them." He further states, that "the toxic substances in the blood, whether generated within the body or derived from without, are in a great measure eliminated by the kidneys and in pregnancy the needs of this elimination is neccessarily greatly increased or should be, but if the kidneys fail to do this extra amount of work, accumulation is produced and intoxication results," and that said retained toxins are directly responsible for the albuminuria and convulsions of puerperal eclampsia.

Some four years after his patient's first illness she again became pregnant, and was delivered at full term of a healthy child. She neither had at this time kidney complication or convulsions. The article is one of unusual merit and we think the case reported by Dr. Bellrose an interesting one. He further states, "that a woman once having suffered from an attack of puerperal eclampsia and recovers without any perminant injury to the kidneys will not neccessarily suffer from a second attack should she again become pregnant, but if the kidneys are perminantly injured (whether the injury be great or little) the danger of a second attack would be very great."

In closing his paper Dr Bellrose states that "puerperal eclampsia is not caused primarialy by a diseased condition of the kidneys, but believes that poisons or toxic substances accumulate in the blood, and if not eliminated through the natural channels, will produce inflammation of the kidneys, hence the origin of albuminuria in eclampsia."

He further states that he "thinks it the duty of exery physician engaged to attend a case of confinement two or three months in advance of the expected time, as they sometimes are, should in every case of swelling of the feet, especially if accompanied with headache and stomach symptoms give special attention to the kidneys and bowels, and in bad cases the diet and skin by so doing, he believes that much or all of the toxins that accumulate to excess in the blood, could be largely eliminated thereby preventing a possible attack of puerperal eclampsia. He also advise premature delivery when the child is viable, in eclamptic cases that does not respond to treatment after a first trial. He states that delivery should not be delayed after the third or fourth convulsions, by so doing the life of the child might by sacrificed.

Infantile Progressive Paralysis.

Brisler in the Uuniversity Medical Magazine, reports the case of a girl, aged thirteen and a half years, whose mother several maternal relatives, and grandmother were insane, but whose brother and sister were in good health. When six years of age, the patient went to school, but made only slow progress, and was finally expelled as unruly and unteachable. Her illness dated from fourteen months prior to her first visit; at that time she became affected with chorea. When seen for the first time she was restless, dull, irritable, cried, was completely demented, and helpless. She could formerly read and sew, but for the past two or three years these had been impossible; she refused food and was unclean in her habits. Articulation was unaffected; epecial senses apparently normal. There were no paralyses, the gait tripping. There was loss of memory, but no hallucinations; the patient took no interest in her surroundings. During the first three months of observation the patient became duller, and nutrition failed. At the end of four months she became confined to bed because of excessive weakness; there occurred slight facial paralysis and bedsores. The patient became more restless and less conscious, and had some rise of temperature. There ensued three convulsions with conjugate deviation of the eyes, and six days later, under symptoms of general paralysis of the brain, death occurred, the patient being fourteen years and two days old. She had never menstruated. At the autopsy there were found thickening of the dura mater, turpidity, and œdema of the arachnoid. In the subarachnoid space there was a quantity of serous fluid. The pia was in places

adherent; the convolutions atrophic. The brain substance cut like liver, and the cut surface showed many dilated veins. The upper layer of the cerebrum could be stripped off like the skin of a roasted apple. The absence of bulbar symptoms, difficulty in in rrticulation, and of ideas of grandeur, is noteworthy. The reported cases oceur mostly in girls, and the initial symptoms are frequently those of chorea.

Latent and Transient Pericardial Effusion.

Ewart, writing in the London Lancet refers to the fact that pleural effusions may develop by degrees without pain or initial severeity of symptoms, finds justification for the supposition that pericarditis may develop in the same way, in the agglutinations, bands of adhesions, the thickenings, and the fibrous deposits found after death in the pericadium of those in whose history there is no record of pericarditis. He believes that pericarditis is less infrequent than is sometimes thought, and that it may originate, run through a short course, and disappear entirely unsuspected. He reports three cases (1) nephritis; (2) valvular disease (3) acute rheumatism.) In all there developed a pericardiai effusion which came on without manifest symptoms and persisting a few days, disappeared. The diagnosis was possible only by a very careful examination, particular attention being directed to percussion, and the taking of tracings. The alteration in the outline of the normal cardiac dulness at the anterior base of the thorax is dwelt upon. The liability of overlooking these effusions is mueh increased by the comparative rapidity of their reabsorption. He concludes:

1. Effusions may occur in the pericadium independently of acute pericarditis, under the influence of rheumatism, of cardiac affections, of Bright's disease, etc.

2. If of moderate size they may be capable of rapid reabsorption; and in that case, not attracting attention eitheir by the painful symptoms of pericarditis or the pressure symptoms of fluid, they may often run their course unobserved.

3. As in the case of the analogous pleural effusions, they may be dependent upon a subacute inflammatory process. More often they are probably passive or mechanically induced.

4. Rest and diet and the administration of cathartics, of diaphoretics, and diuretics are the only treatment needed in the average case. In the severe cases, which are usually those of advanced kidney-disease, the effusion as it steadily increases becomes obvious, and paracentesis may be necessary,

5. The most important practical conclusion is that our physical examination should be accurate and searching, and that in all cases of enlarged precordial dullness the simple tests for the presence of pericardial fluid which have been described should be thoroughly applied.

The Influence of Climate in Causation and Prevention of Phthisis Pulmonalis.

Dr. Haylett, Pueblo, Colo., ("New England Medical Monthlh,") believes the question of atheology and prophyiapis of consumption to be more intimately associated with climatic influences than many realize, and that climatology receives too little attention.

Too few of the physicians of this broad land interest themselves in the comparative study of mortuary statistics in relation to the seasons with their variations; the characteristics of the winds; the amount and distribution of precipation; the character of the soil; and the amount of sunshine common to their individual localities.

City and local boards of health should request physicians to furnish all necessary information for complete mortuary records. Individual investigators who have medical and muteorological training can compile valuable data along this line.

The author believes that the average daily, monthly or yearly deaths from a disease possesses an intimate relation to the number of cases of that disease from which deaths occur.

Whatever aids in the cause will show its effects in the latter stage as well as the first; and it follows that the deaths should be more frequent with, or immediately following those conditions of climate which tend to cause disease.

The low, damp, cold climate conduces to the development of respiratory neuroses to a marked degree as proven by the mortuary statistics for these diseases in this climate.

The great fog periods of London are cited, and from a table it is noticed that the climax death-rate for respiratory diseases was for the week ending Feb. 7, 1880, with a total of 48.1 per cent. per thousand—a rate unequalled since the last cholera epidemic.

Phthisis pulmonalis, probably more than any other disease, depends upon preventable conditions intimately associated with a foul soil, insufficient diffusion of gases and smoke, and density of population—also microbes.

It is cited that the counties of Peunia, possessing a high rate of mortality from this disease have little elevation and a great precipitation while it is rarest in the elevated districts (1,700 to 3,000 feet) where a fewer number of cloudy days and sudden temperature changes exist.

A dry, equible and aseptic atmosphere; an attitude of 3,500 to 6,000 feet, a well-drained porous soil and the greatest possible amount of sunshine are the chief and essential elements of a favorable climate necessary to combat the turbercle bacillus and fortify the tissues against invasion of the same.

Less frequently would patients hear the verdict,—"too late," were they advised earlier, advised properly and less inclined to disobey physical laws.

When an inherited or acquired diathesis exists, a tubercular surroundings as pointed out above, should be sought.

The chances of the predisposed patient are vastly better before than after he has become infected with the exciting cause of this incipient foe—the have, alike, of society and the medical profession.

Nervousness in Febrile Affections.

Patients suffering from febrile diseases are often in a condition of more or less intense nervous excitement which, unless promptly relieved, tends to increase the existing debility and exhaustion. In cases of high fever the measures instituted for reducing the elevated temperature sometimes suffice to allay the nervousness, but quite often this does not follow. It has then been customary to resort to the use of opiates despite the many objectionable features connected with their use. Clinical experience, however, has shown that there is one drug which deserves to be termed both an antipyretic and sedative, and which may be confidently relied upon to bring down the temperature and relieve the attendant restlessness, sleeplessness and headache. The reduction of temperature under the use of phenacetine is effected promptly, safely and pleasantly. As the fever subsides the patient is left in a comfortable state and sleep soon ensues. Among the large number of observations on the value of phenacetine in febrile diseases recently published, the following by Prof. E. G. Janeway, of New York, is of interest as being based upon an exceptionally large experience, In a discussion on the management of pneumonia before the New York Academy of Medicine (Med. Record, Dec. 12, 1896,) the author said that in one case in which the temperature rose to 106 degrees F. cold compresses did not reduce it and the attendant restlessness, while phenacetine did. This experience was repeated twice in that case. The phenacetine reduced the temperature and also induced sleep as morphine might, but it did not, like morphine, cause constipation, tympanites, and derangement of the liver. This experience from a distinguished physician, who has employed phenacetine since its introduction, demonstrates the permanent value of this remedy.

Notice!

The Physician's Vest-Pocket Formula Book, published by McKesson & Robbins will be found very useful to the practitioner. It contains a table of weights and measures, antidotes to poisons, various tables of reference, and a very complete series of tables, showing the composition of foods and alcoholic liquors. These tables should prove valuable to the physician in cases where special attention to dietary is necessary. The book also contains an extended series of notes on some of the new pharmaceutical preparations and a complete list of formulae of the McK. & R. Gelatine Coated Pills. A copy will be sent free of charge to any of our readers on ayplicetion to McKesson & Robbins, 91 Fulton Street, New York.

Cleanliness the First Principle of Hygiene.

In a very instructive article, published in the Journal of the American Medical Association, Dr. Wilh. Hotz, Chicago, Ill., points out, that in the practice of medicine, the law of cleanliness—the first principle of hygiene is not in every respect sufficiently observed, at least not as much as the modern progress of science with reference to the cause of disease would demand.

Quoting how in ancient times that law of health was recognized already, the writer claims that in our times of modern civilization, with its high demand for physical and mental endurance, proper care of the body ought to be still more regarded, if mankind does not want to endanger all that has been gained through pain and difficulties of every kind for centuries past. Too much stress is laid by the practitioners upon *minute* scientific explanation and morbific definition in regard to the influence of microbes on the human body, while the real cause of disdisease, *i. e.*, the lack of cleanliness in some way, is often entirely ignored.

Explaining his view about the action of pathogenic microbes the writer continues: "So we find microbes most numerous wherever dead organic matter exists—the primary of health. Hence the quick and complete destroying of all dead organic matter, which is, and can not be well protected from putrefaction, would be the best method of preventihg the spreading of pathogenic microbes. * * * * and which force would be better to that end than fire? Why do we not make use of the same wherever it is advisable, instead of allowing the ground on which we live to be soiled by waste and refuse of organic nature of every kind? Why is it that, in contradiction to our modern progress and our knowledge about the origin of disease, we still let the ground get infected by following the old method of burying corpses of men and animals and letting nature take care of them by the way of the most slow and unwholesome process we know of, the action of putrefaction, the same one which we know to be the starting point of almost all diseases ? I consider the micro-organisms as ideal watchmen of health, because their presence and action is quite often the first indication that something must be wrong, or that our body is in an abnormal state of health * * * * * *

I cannot believe that the pathogenic microbes are the direct cause of disease, but rather think that about in the same way as pure chemical poisons effect the system, disease is origiuated either by toxic materials, as the products of our *own* metabalism, poisoned air, impure food aud bad surroundings, or as in cases of inoculation of specific microbes by *their* products of metabalism." Consequently has the hygienest only to deal with poisonous or non-poisonous substances man is liable to come in connection with, while he must consider all sorts of microbes as useful agents which protect us from disease. This assertion is proven by the study and observation made on the human body under circumstances of great sensitiveness to all unfavorable influences as in cases of direct injuries and wounds, in disease, or in the early childhood.

The first thing nature tries to do in case of disease usually is to clean the system from foreign substances and to prevent further supply. Such symptoms as loss of appetite, nausea, vomiting, diarrhœa, profuse sweat, etc., tell us very distinctly in what way the body will regain its normal state, and also where the origin of the abnormal eondition lies * * * * * what the physician *does* and the only thing he *can* do for the sick is certainly to assist nature in its efforts to restore health, and, as far as the symptoms indicate the need of the system. the physician has to be only a true student of nature in order to be also a successful physician.

Inhalations of Oil of Cinnamon in the Treatment of Consumption.

Thompson reports in the British Med ical Journal five cases of phthisis in whom considerable improvement was effected through the use of oleum cinnamomi ver.

His conclusions are as follows: That oil of cinnamon, when used as an inhalation in certain stages of consumption, affects injuriously tubercle bacilli, is, I think, rendered probable by the very remarkable way in which, in the above cases, the organism diminished in num-

bers or disappeared from the sputum in a comparatively short time after commencing treatment; also by the tendency of the disease to relapse when inhalation was discontinued. It appears probable that the oil of cinnamon tends to cure consumption in two ways: First, in the very early cases of catarrhal phthisis, by so directly affecting the bacilli as to stop their growth; and, secondly, in cases that are rather further advanced, by only allowing organisms incapable of growth to pass along the bronchi, and thus prevent the infection of fresh lobules. Besides the five cases reported, the drug was tried in the more advanced stages of the disease, but, as might be expected, without any benefit. The symptoms subsided in the following order: The expectoration and cough were the first to improve, then the temperature tended to normal, and finally the weight began to increase. The drug may be administered from an ordinary inhaler. Continued inhalation of the vapor caused no irritation of the buccal cavity or of the air-passages, and no untoward constitutional effects were noted.

Nervous Diseases of Syphilitic Origin.

Collins of New York has come to the following conclusions: (1) That exudative and degenerative diseases of the nervous system, due to syphilis, are most liable to show themselves at the end of the third and the beginning of the fourth decade of life. (2) Thorough and prolonged administration of antisyphilitic remedies during the activity of the virus does not seem materially to prolong this time limit. (3) That active and prolonged antisyphilitic treatment does not seem to prevent the development of such diseases as locomotor ataxia and general paresis. And, further, that the cases in which syphilis is confessed, and in which treatment has been most desultory and incomplete, are not more liable to the earlier development of or to the severe manifestations of either of these diseases, than those cases are in which the treatment has been all it should be. (4) That the administration of antisyphilitic remedies in the most approved way does not fulfil the requirement of cure, and that syphilis is often an incurable disease.

Alcoholic Liquors and Physical Exercise.

The main object of physical exercise is to get our bodies into such a condition, whereby the average amount of working power can be utilized at any time without harm to the bodily health. To keep up this amount of physical power and endurance, we must be obedient to certain great laws of health. One of these laws, which can never be violated with impunity, is that which forbids the use of alcoholic liquors and tobacco The "Scientific Temperance Bulletin" says that strong drink and tobacco will put to naught the most elaborate system of physical training. Those who train athletes, baseball and football players, oarsmen, and all others who take part in severe physical contests, understand this, and rigidly forbid their men to touch a drop of alcoholic drink, or even to smoke or chew tobacco. Experience has proved beyond all doubt that strong drink is a positive injury, either when men are in training for or undergoing contests demanding long-continued physical endurance. The same law holds good in the ordinary physical exercises of everyday life. Alcohol and tobacco act as poisons to the nerve force which controls the muscles, and thus lessen the amount of muscular power and endurance.

The Effect of Alcohol upon the Growth of Children.

It has been stated that milk should not be neglected in the dietary of children, because it contains all that is necessary for their development—fatty substances, albumin, oxygen, and the principal minerals. With a milk dietary we may feel more assured that the growth will be normal; that there will be no failure in height, no rachitis, no bony lesion. The use of alcohol as a drink by children is one cause of depopulation. It is even more dangerous for the adolescent than for the adult; as it causes organic changes, hinders physical development, and impairs the normal faculties even to the extent of degeneracy.

San Francisco has a physician ninety-four years of age, who has been in active practice for sixty-four years.

The Mouth and Throat, and Their Resistance to Pathogenic Organisms.

Hugenschmidt according to the British Medical Journal has inquired experimentally into the reason why wounds of, or operations on, the buccal cavity are so seldom followed by infective complications. (1) Bactericidal power of the saliva: Petit, Sanarelli. and recently Albert Mills, have affirmed this power. Sanarelli, however, used filtered saliva as a culture medium, which contains only 0.15 per cent. organic matter. The author inoculated saliva passed through a Chamberland's filter with cultures of various organisms, and then inoculated gelatine tubes with it directly, and after leaving it at 37° C. for a quarter, one, twenty-four, and forty-eight hours respectively. In other experiments the saliva was previously heated to 60° C.; 37 experiments showed that the bactericidal action of saliva is very questionable, organisms increasing in number rapidly in it. Saliva warmed to 60° C., and thus deprived of the bactericidal principles analogous to those of blood serum, is more fatal to torula and staphyloccus aurens than before, but warmed or not it has no action whatever on sarcinæ, streptococcus, or cholera vibrios. (2) Mechanical action of saliva: Organisms are diluted and swallowed so that the gastric juice destroys many of them. (3) Sulphocyanide of potassium was proved in a solution of 0.06 to 20 per 1,000 to have no bactericidal power. (4) Phagocytosis and chemiotaxis. (*a*) Experiments with unfiltered saliva: In the mouth and pharynx there is a true lymphatic sac containing crowds of various kinds of phagocytes under the epithelial layer. Leucocytosis here is a physiological act, and migratory cells are constantly passing on to the mucous surface between the epithelial cells. The saliva was proved to possess the property of positive chemiotaxis, which aecelerates the accumulation of leucocytes. The clear fluid obtained on the surface of human saliva after standing in test tubes was introduced into capillary tubes closed at one end. The latter were then placed in the peritoneal cavity of guinea pigs or mice for eight hours, when a plug of leucocytes about 2 mm. long was found in the interior. Saliva which had previously been kept for twenty-four hours in the warm, and which contained more organisms, produced a longer plug, showing that the attractive power increases with the strength of the culture. Saliva of animals (guinea-pigs and mice) attracts the leucocytes of the same animal. Control tubes containing broth cultures of staphylococcus aureus, which exerts a positive chemiotaxis, and normal saline solution which exerts none, were also used. Stained cover-glass specimens showed that the leucocytes in the tubes were mostly polynuclear phagocytes. This positive chemiotaxis becomes very marked if there is an open wound in the mouth, the surface being quickly covered with a white layer of leucocytes. These were proved by stalned specimens to be able to swallow and destroy different kinds of organisms present in the mouth. Normal saliva does not contain streptococci, but if a guinea-pig's mouth is wounded and a virulent culture inoculated into the saliva, chains of streptococci are found in the leucocytes covering the wound after four hours, and healing is rapid. Thus the resistance of the buccal tissues is due to phagocytosis. (*b*) Experiments with filtered saliva showed that the positive chemiotaxic power is due not to the saliva itself, but to its contained organisms. (5) Other agents in resisting bacterial invasion are the constant normal desquamation of epithlieum, which dislodges quantities of microbes, which are then swallowed with the saliva, and the diminution in the number of varieties present by the struggle with the common salivary saprophytes.

The Influence of Heredity in Mitral Disease.

Servin finds that it is not uncommon for parents to transmit to their children visceral as well as external characteristics, and of all the viscera the heart seems the most susceptible to hereditary changes. Of these changes pure mitral stenosis would almost seem to be a variation in structure rather an actual disease. Three points are found to obtain in this condition: (1) The mitral stenosis is fairly common, but may not manifest itself until somewhat late, and then as the result of some alteration of circumstances such as unusual effort, fatigue, pregnancy,

etc. (2) Certain observations go to show that some subjects of mitral stenosis have procreated children affected in the same way. (3) The mitral stenosis may be a family affection; that is to say, one may meet with it in several brothers and sisters. The author does not seem prepared to say what influence the father or mother may have in transmitting this condition. He thinks the question is of great importance, and one that is not sufficiently known, for he says much trouble and suffering can be saved if on the discovery of mitral stenosis in a parent the children be carefully examined, in order to ascertain their cardiac history; for under these circumstances exercise, avocation, and food can be regulated so as to avoid a sudden break down of the cardiac vigour. It seems more particularly important in the case of women who so frequently suffer from the effects of mitral stenosis during pregnancy.

The Treatment of Eczema in Children.

One form of eczema which may materially interfere with the health of the child is that form which usually appears on the bottom and posterior aspect of the thighs of infants. Its origin can generally be traced to the irritating quality of the urine and fæces. These children cry a great deal, sleep proportionately little, and, besides, there is danger of ulcers and abscesses forming on the diseased parts, with their accompanying ill-effects on the health, and even more serious consequences may result. As these cases often resist all kinds of treatment with ointments and baths, Dr. Dueages recommends one which has given him the most rapid and excellent result.

The child must at first be given a bath of 27 to 28 degs. R. It is of importance to dry the child after the bath without friction of the diseased parts, by the simple pressure of a soft towel or absorbent cotton. Following the bath, any kind of babies' powder is to be thoroughly dusted on the eruption, and then it is to be covered with gutta-percha sheeting, which must be kept well in place by the diaper, or, if necessary, by a roller bandage. In this way the deleterious effect of the urine coming in contact with the skin is avoided, and a chance given the parts to heal. Frequently the moist eczema is already converted into the dry, scale form on the second day of treatment, and rapid healing takes place.

Early Exploration of the Wounds of the Abdomen.

Ernest Laplace, of Philadelphia, (Medical Bulletin) insists upon the necessity of an early exploration of all wounds and injuries of the abdomen, in as much as all present methods of exploration of the abdominal contents fail to reveal the injury with any degree of certainty. On the other hand, the mere exploration of the abdomen is, in these days of aseptic surgery, accompanied with no evil results. To strengthen this position four interesting cases are reported.

A man shot in the abdomen about the umbilical region, and presenting no outward appearance of internal injury, was operated upon one-half hour after the shooting, and eight perforations of the ileum were repaired, also a rupture of the interior mesentery artery. A large amount of bread, beer and cheese was removed from the abdomen. The case recovered without special symptoms of peritonitis.

Case 2. A gunshot wound of the abdomen in the region of the bladder, being operated upon two hours after the injury, showed the perforation of the bladder and ileum, likewise large amount of clots. These injuries being repaired the patient recovered.

Case 3. A man thirty-five years of age, being struck by a falling embankment, presented a large pear shaped tumor in the hypogastric region. It was impossible to decide whether this was due to a distended bladder. An external urethrotomy was performed and a gush of blood followed, causing the pear shaped tumor to disappear. Fearing lest the abdominal cavity had been injured, an exploratory incision was made, and finding it entirely free from injury, the incision was immediately closed. The patient left the hospital at the end of five weeks fully restored.

Case 4. A man aged thirty years fell from a wagon and was run over. The abdomen was tympanitic and very tender. A laparotomy was performed and the in-

testines were found congested, a small amount of free blood was found in the peritoneal cavity. On searching for the source of the hemorrhage a small vessel in the omentum was found spurting. This case was drained with a glass tube for three days and recovered.

An analysis of the above cases will show:

1. That surgical exploration of the abdominal cavity was the only means of positive diagnosis.

2. That in three cases it at the same time enabled to fulfill the indication, without which death would have resulted.

In the other case, though the exploration was negative, it did no harm, but completed the diagnosis.

3. We are, hence, emboldened to be aggressive and to do the utmost for our patients which asepsis and modern pathology suggest, in order to save them from accidents so long considered beyond relief.

Finally, we should not hesitate to open the abdominal cavity to establish a diagnosis in a perilous case.

Disinfection of Rooms.

The air of infected rooms can, by free ventilation, be changed and rendered innocuous. The ultimate aim, therefore, of all processes of disinfecting premises is to obtain a sufficient deposit of antiseptic material on the surfaces of walls, floor. and ceiling. Considerable doubt has of recent years been thrown upon the efficacy of sulphurous anhydride in performing this work.

Kenwood experimenting with diphtheria bacilli in a room of about 2,000 cubic feet capacity, found that if SO_2 were present to the extent of ½ per cent., the microbes were killed after an exposure of from six to eight hours, and that growth was inhibited if the gas were present in the strength of ¼ per cent. No watery vapour was added, and the result was the same whether the gas was generated from cylinders containing it in the liquid state or from burning sulphur. From these results he is of opinion that the present methods fulfill all practical requirements. No test was made with more resistant and spore-bearing varieties of bacilli. Pfuhlos tested the value of formaldehyde vapour, generated from a Krell's lamp. After an exposure of from 18-24 hours, the more resistant and spore-bearing organisms were not destroyed, and he therefore judges the gas to be unsuitable for this purpose. Formalin (40 per cent. formaldehyde) he found to posseas strong bactericidal powers, a 1 per cent. solution killing pure cultures of cholera and diphtheria bacilli in an hour, It is best employed, as recommended by England, in a 2 per cent. solution to spray the walls and contents of the room, which is then closed for twenty-four hours. About 60 70 c.c. per square metre of surface are used. Klein finds that sodium hypochlorite in solution of 1 in 200 destroys non–sporing microbes in five minutes, and even sporing organisms, such as rnthrax, are disinfected in an hour and a half. Tested on fresh sewage, a solution of 1 in 100 devitalises non-sporing forms in ten minutes. Such solutions would be valuable in domestic disinfectton. There can be no doubt as to the superiority of spraying over fumigation. Even if we take into account the period which must elapse before the room be dry, the former process is the most economical of time. Spraying ensures more certainly the cleanliness of surfaces, but it is more easily scamped by negligent workmen than is our present process of fumigation.

Treatment of Ringworm.

The main obstacle to cure is the difficulty of bringing the parasiticide into tact with the fungus. One of the best of ointments is composed of pure acid carbolic and salicylic acid, each half a drachm, to the ounce of vsseline. This may be rubbed into the patches with a stiff brush, which can be made by cutting short the bristles of an ordinary penny painter's brush. Chrysarobin half a drachm or a drachm to the ounce of vaseline, may be tried, but always with the greatest caution, for if the patient get a little of the drug in his eye it may cause severe suffering. Morris recommends a lotion of salicylic acid, five to twenty grains to the ounce of chloroform, applied every night. He says, however, that if the application is to succeed, no fatty substance must be used at the same time. A

similar caution extends to iodine and blistering fluid. A good plan is to rub the shaved scalp with pure turpentine for three or four minutes, until the child cries out. The head is then washed with carbolic acid soap—dried, and painted over with tincture of iodine. This process may be repeated daily for a fortnight. Another plan has been found by the writer to answer well in chronic and intractable cases. After rubbing the head with turpentine, as above described, it is painted over with a solution of biniodide of mercury in spirit of the strength of 1 in 500. Each night the head is packed with lint soaked in the following lotion, and covered in with oil silk or a rubber bathing cap: ℞ Sod. chlorid.; sod. hyposulphit, āā. ʒj.; ol. sanitatis, ʒij., aq. ℥ x.; m. fat. lotio. Sign.: Apply on lint. When the head shows much improvement, an ointment of corrosive sublimate will often hasten matters in a remarkable way. It may be made thus: ℞ Hyd. perchlorid, grs. ij ; ac. salicylic, grs. xx.; adip. benzoat, ʒj.; m. ft. ung. Sign.: To be well rubbed into affected parts.

Many other methods have been advocated, but the foregoing should be enough to cure most cases in a few months. However, there will always be a certain margin that will resist treatment for years. When the disease has drifted into this chronic condition much good may often be done by stimulation with such applications as croton oil, coster's paste, liniment of iodine, strong acetic acid, or blistering fluid.

The application of iodine, it my be noted, has some practical value, because it stains the affected hairs a deep colour, and thus enables one to note the extent of the disease.

Perforating Typhoid Ulcer.

Dr. Herringham (Royal Medical and Chirurgical Society, Jan. 26, '97) reported a case of Typhoid Fever in which symptoms of Perforation occurred during convalscence. Laparotomy was performed, but no lesion found. Recovery followed. Though perforation in typhoid fever was allowed to be almost invariably fatal, cases had from time to time been recorded in which symptoms usually held to indicate this event had yet been followed by recovery. Whether in these cases the bowel had actually been perforated must always remain doubtful, and it had been pointed out by Fitz that there were no trustworthy signs which were pathognomonic of perforation, and that the occurrence of even a local peritonitis alone would be quite sufficient to explain the condition. That the same symptoms might occur even when there was no peritonitis at all was shown by the following case: A girl, aged, thirteen years, who was passing through an attack of typhoid fever had a subnormal temperature on and after the twenty-second day. On the twenty-eighth day symptoms appeared like those of perforation—namely, acute pains, frequent vomiting, and small pulse, together with rigidity and tenderness of the abdomen. These symptoms came on suddenly. The bowels had been open the day before. An oil enema was administered, but neither this nor the administration of morphia gave any relief. After three and a half hours it was considered advisable to perform laparotomy. No abnormal condition was found except that the colon contained scybala. Recovery was uneventful. The condition, although giving rise to alarming symptoms, was evidently due to constipation. The patient was in good condition, or the operation would not have been attempted.

Oxygenised Water in Uterine Hæmorrhage.

Petit has found oxygenised water a useful styptic in the diffuse bleeding of acute metritis, and in that due to fibroids which leave the uterine cavity sufficiently accessible. If a stem trimmed with cotton wool dipped in water containing twelve volumes of oxygen, and not allowed to dry in the air, be rapidly introduced to the fundus, an abundant froth pours from the outer os, and the uterus contracts upon the stem, though not so quickly or intensely as after the application of perchloride. After the discharge of a few drops of serum, more or less coloured by hæmatin, the hæmorrhage immediately arrested; there is no pain, no modification of the tissues, except a slight bleaching of the mucosa, due rater to the decomposition of the liquids than to any caustic effect. The hæmostasis persists for days, enabling the woman to regain strength, and after one or more successful applications, undergo, if necessary, an appropriate radical operation.

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Anglioneurotic Oedema.

In an article on "Anglioneurotic Oedema" by Dr. Rupert Norton of Washington, D. C., which appeared in the New York Medical Journal for January 30, 1897, the author states that this affection cannot properly be called a disease, since the œdema is only one of many symptoms, which, when grouped together go under this name, as it is the œdema which is the most prominent symptom. The malady has a large number of synonyms, which characterize its complex nature; among these are the following; namely, only the adjectives which have been used to describe the œdema—localized transient; subcutaneous, fugative, acute essential, and numerous others, other names for the disease are phenical congestive tumors, giant-urticaria, and urticaria tubuosa. The affection is met with at all ages from infancy to ripe old age, one sex being as much affected as the other. It also occurs in all counties so far as known, and at all seasons of the year; the temperature having but little influence on the disease. It may be met with on any part of the external body, and the mucous membranes are also affected. It attacks the uvula and throat, and may necessitate tracheotomy, or even cause death by suffocation. The lungs and brain may also show signs of being implicated. Its causes are many and various—some of the principal being exposure to cold, over work and a neuropathic taint. It is also often seen at the time of the climacteric, may be due to gastric irritation and constipation. It may be induced by a blow, and in other cases is distinctly of a reflex origin. The œdema is never inflammatory though it may be associated with slight rises of temperature. It does not fit on pressure. Only one portion of the body may be attacked, or many parts, and at different times, different parts. The extent of the œdema may be very slight or may affect a whole limb or even the entire body. It may occur at a regular hour, and at the same hour for several days. The affection may continue over long periods of time, though a single attack is commonly of but short duration. Its degree of severity is evidenced at times by the fact that it may cause death, but usually it is of a mild though possibly disfiguring character. It may be associated with urticaria, and from this symptom be most annoying, but the itching is apt to last but a short time. It may be defined as a disease marked by the appearance of one or several localized swellings of varying size occurring on any portion of the body at any time. It has no after effects, and the kidneys do not appear to suffer. The disease is a tropho-neurosis, due to disturbance of the vaso-moter system. No remedies appear to be of any lasting avail, but special attention should be given to building up the general system, and so far as possible strengthening the nervous system.

Diuretin in Acute Bright's Disease.

Dr. Michael F. Cox in the Medical Press, submits a report of a case of acute Bright's disease successfully treated with Diuretin. The case was attended by oliguria and a great amount of albuminuria and extensive anasarca. Improvement being tardy under ordinary diaphoretic and other such treatment, the patient was put on 15 grain doses of Diuretin three times a day, with the result that the urine, which was reduced to one pint a day, was doubled every succeeding day until it nearly reached 16 pints in five days, maintaining its specific gravity, whilst the albumen and dropsy entirely disappeared, and the patient was soon enabled to leave quite well.

Dr. Cox has also seen Diuretin relieve a patient from his suffering from dysuria, and another patient of a scrofulous diathesis, who had occasional attacks of dropsy. In some other cases he had not found it so successful.

Notice.

Some things are good, and some things are better. We were satisfied with some old remedies until we found better.

The profession has been on a hunt for a reliable preparation that would reduce fever and not degress the heart. They have both been met in the very valuable preparation "pyroctin." It is not only thoroughly reliable in its action, but easy of administration as it is soluble in water. We know of nothing that will take its place, but find it will take the place of anything on the market.

IN ANAEMIA, MALNUTRITION

AND KINDRED DISEASES

Dr. Drees' ALBUMINATE OF IRON can be relied upon to give positive results. Drees' Iron preceded the long series of organic iron preparations which were designated to replace it, but which have not been successful in shaking the confidence of the Medical Profession in

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Books and Contagous Diseases.

There is no question that the specific contagia of many zymotic disorders, and especially of scarlatina, small-pox and typhoid fever, in the form of particles of material emanations from the bodies of patients, may attach themselves to the covers and pages of books and so be carried from the sick to the healthy. In private families all books and periodicals used by a patient during his illness from a zymotic disease had best be burnt upon his convalescence. In general hospitals in whice zymotic diseases are treated, scrupulous care is taken that all literature used by patients suffering from contagious and infectious maladies shall be reserved exclusively for use in the special wards devoted to such disorders. There is a great fear that zymotic diseases are sometimes spread by books through the agencies of libraries and secondhand bookshops, and it would be a very good thing if the literature of such establishments could be occasionally subjected to efficient disinfection. When preventive medicine is searching out and checking all possible means by which infectious and contagious maladies are spread, the part which books may play in the propagation of disease should certainly not be overlooked.

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The Laryngoscope, published in St. Louis, has been selected as the official organ, for the year 1897, of the Laryngological Section of the New York Academy of Medicine. This selection, and the great probability of the same journal being chosen by other Laryngological, Rhinological and Otological Societies as their official organ, would indicate that The Laryngoscope has become what its proprietors stated they intended to make it, *i. e.*, The American Journal of Record for the specialties represented.

Tannigen in Intestinal Affections.

J. Vandenberghe in the Edenburgh Medical Journal remarks that hitherto attempted disinfection of the alimentary canal *per os* has not greatly succeeded. The chief obstacles to be overcome are too early absorption of the antiseptic, that is, before it reaches the affected parts; secondly; the prevention of decomposition of the antiseptic also during its early passage. Even if the drug reaches the bowel in relatively important quantity it finds itself spread over so large a surface and mass of contents as to destroy a seriously antiseptic effect. This difficulty in influencing directly the bowel contents has led to the trial of those substances which act on the bowel wall, and thus indirectly combat the phlogoses. Such remedies are the astringents, and notably tannin. The difficulty of a too rapid absorptiou has been overcome by etherising the tannin (as had been done with the aromatic esters, betol, salol, etc.) The tannic esters do not become changed till they reach a sufficiently low level. They there exert their astringent action. Tannigen or diacetylic tannin was first utilised by H. Meyer and J. Müller. Its auticatarrhal, antidiarrhœic action was reported by them as most obvious. The author confirms their experience. In twelve cases of various enteritis, acute and chronic (ten children, two adults), he prescribed tannigen in doses ranging from 0.5 to 2.5 gr. a day with much success. Its exhibition coupled with proper feeding repeatedly resuscitated children doomed otherwise to die of autointoxication and exhaustion. A typical case of its value is the following: D., a farmer, emaciated and collapsed, face subicteric and greatly altered, had six months endured gastro-intestinal pains with abdominal tension and vomiting. Abundant serous diarrhœa with colic alternated with constipation, sometimes obstinate. The food passed through the bowel to appear almost unchanged in the stools. The abdomen was distended, the liver slightly enlarged. The diagnosis was infective gastro-enteritis due to lapses in diet and dissipation. Treated by striet diet, boiled milk, toast, eggs, etc., and salicylate of bismuth with calumba for eight days without success. Benzonaphtol given during similar period with very slight improvement. Tannigen was next given (2.5 gr. in twenty-four doses, to be taken every hour day and night), there being as many as twenty stools a day at this time. Astonishingly rapid improvement followed, and complete recovery resulted

Pathology of Exophthalmic Goiter.

Dr. Robert Hutchinson, at the July '96 meeting of the British Medical Association, maintained that the sole active element was the colloid material. Baumann's thyroidin was merely an artificial derivative of this. He had failed to confirm Fränkel's views as to the presence of an alkaloidal substance. (1) Was there over-secretion of colloid, or (2) qualitative alteration in the secretion? Morbid anatomists were agreed that there was no increase of colloid in the thyroid, nor was there evidence of unusually rapid absorption from the sacs. With regard to the second question, the Doctor had treated two patients with extracts of a large goître from a typical case of Graves' disease. No palpitation, exophthalmos, or goitre was produced, but a reaction occurred exactly similar to that resulting from healthy sheep's thyroid, which they were already taking for skin disease and obesity respectively. Similarly, in a dog after removal of the thyroid, only slight rise of temperature and pulse rate resulted from large doses of the abnormal gland. So far, then, it appeared that the secretion was not abnormal in character. Further, Graves' disease and myxœdema were no more antithetical than was the latter to any fever accompanied by increased metabolism, and no arguments were to be deduced from such a comparison. He considered the disease to be essentially due to altered tissue-metabolism, possibly of central nervous origin. The results of partial ablation in Graves' disease did not preclude this view, for if the tendency to acceleration of tissue-metabolism—a well estabilished property of normal thyroid secretion—was removed by partial ablation, it was evidently possible that even a functional loss of control on the part of the nervous system might fail to suffice to start that train of metabolic changes which led to the symptoms of Graves' disease.

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Woman's Inferior Sensitiveness to Pain.

Dr. Ottolenghi reports the tests made of the sensitiveness to pain and the endurance of pain in six hundred and eighty-two women. He finds that women are less sensitive to pain than men, and that this sensitiveness is less in early life, increases to the twenty-fourth year, and decreases after that. The higher classes are most sensitive and the degenerate least. He found the latter class very obtuse to the sensation of pain. Endurance of pain varies between much broader limits in women than in men, reaching a maximum far beyond the masculine limit, possibly due to the "greater suggestibility" of the female sex. General sensibility reaches the highest point in the nineteenth year. He concludes that sensitiveness to pain stands in close relation to the "psyche," while "general sensibility" depends upon the peripheral nerves. He considers woman's comparative insensibility to pain as a sign of her inferiority to man, as the uncivilised and degenerates are least sensitive. He attempts to prove a connection between this characteristic and her longevity.

Unguentine.

Dr. G. B. Murray, of Greenwich, N. Y., writes:

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A free sample of Unguentine and literature will be sent to any reader who will mention The Charlotte Medical Journal.

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Cough Due to Irritation in the Upper Air-Passage.*

The majority of coughs-probably have their origin at some point in or below the larynx; but it will sometimes be found that the cause is some irritation in the respiratory passage further up. In seeking the cause of a cough, this must be borne in mind.

Nature and Purpose of Cough.—Cough is always a reflex act; but it is a *normal* reflex of irritation in the larynx trachea, and the further continuation of the air tract in the lungs, and it is an *abnormal* reflex of irritation in the upper air passages. For instance, the normal reflex of irritation in the lower pharynx is *hemming;* about the fauces, *gagging;* in the naso-pharynx, *hawking;* in the uose, *sneezing.*

If cough is set up by irritation in any of these regions instead of the usual reflexes, the phenomenon is an abnormal reflex.

The sensation of irritation in cough is usually referred to the region of the larynx, no matter whence its source.

Cough Due to Irritation in the Nose.—It is possible for cough to be caused by irritation or pathological conditions in almost any part of the nasal cavity.

The two regions most frequently provocative of nasal cough are those including the posterior ends of the inferior turbinated bodies and the posterior and of the septum, and the inner surface of the middle turbinated bodies and that part of the septum lying opposite. In a few instances, cough was found as a pronounced accompaniment of hypertrophic rhinitis. Rather more frequently the same symtom was observed by C. in vaso-motor rhinitis and hyperæsthesia of the nasal mucous membrane. Spurs and deflections of the septum are quite frequent seats of sensitive areas, which are productive of a cough. The tickling cough met with in the later stages of an acute coryza, when the cold is said to have "gone to the chest," C. thinks is frequently due to inflammation of the posterior ends of the inferior turbinated bodies and septum.

Polypi sometimes induce cough. In general cases, cough which was a most marked symptom, was entirely relieved by removal of polypi; returned with recurrence of these growths, and was again abolished by another clearing away of the neoplasms.

The mechanical irritation of dry crusts in atrophic rhinitis, has been mentioned as a cause of cough.

Cough Due to Irritation in the Naso-Pharynx.—A cough may be due to some pathological condition in the naso-pharynx, but not so frequently the case as it is with nasal irritation.

The more common causes in this region are adenoids, and the accumulation of thick tenacious mucus in chronic naso-pharyngeal catarrh. Many cases of so called "morning cough" are due to this latter condition.

Cough Due to Irritation in the Pharynx.—In this region again, is found more frequent causes of cough. The dry glazed mucous membrane of an atrophic pharyngitis is sometimes attended with the symptom.

Rather more frequently, a granular pharynx or a chronic follicular pharyngitis incites the reflex.

In one case, the removal of a papilloma not larger than an ordinary pin-head, springing from the posterior surface of the posterior pillar, almost instantly cured a cough of several years standing.

A elongated uvula is a well known cause of cough.

The tonsils are occasionally the source of a cough, particularly when adhesions have formed between them and the faucial pillars.

A source of cough of great importance, is that of enlargement or a varicose condition of the lingual tonsil.

Hopertrophy of the epiglottis sufficient to cause it to come in contact with the tongue, or any of the surrounding parts, will almost certainly evoke a cough.

The Importance of Recognizing These Sources of Cough;—Observation justifies the belief that they are not as fully recognized as their importance demands. Patients are too often turned away with a sedative which lulls the cough, but does not remove the cause.

Cough is not only occasionally, but very frequently due to some irritation above its ordinarily recognized seat in

*Absract of a paper read before the Medical Society of the State of New York, Jan. 25, by Chas. N. Cox, M. D., Brooklyn.

the larnygo-bronchial tract, and upon the recognition of this fact will often depend the effectual and radical removal of the symptom.

Diagnosis.—This is often a most difficult task. Coughs caused by irritation in the upper air-passages are not attended with any characteristic by which they may be known, unless it may be that such coughs are ussually of the dry hacking variety. Yet the same can be said of certain forms of laryngeal irritation, or coughs due to more distant reflexes.

If marked evidence of disease be present anywhere in the pharyngo-nasal tract, and especially if contact with the probe produce cough in a striking degree, the inference is fair that this locality may be the source of the cough; and then by exclusion, if local anæsthesia of the suspected area, by a four or five per cent. solution of cocaine, hold the cough completely in obeyance, the evidence is conclusive beyond a reasonable doubt that the pathological condition of this locality is the initial of the reflex.

Treatment.—In a very considerable proportion of cases, the local irritation is the prime factor, and local treatment alone will eflect a cure. But if the irritation has been too long continued, or if perverted nerve-action is due to inherited or acquired disease, local treatment will not avail.

It will then be necessrry to institute such constitutional treatment as will restore tone to the nerve centres and idhibit their excessive activity.

Digestion and alimentation and existing diatheses should be the subjects of most careful consideration.

Physiology and Cold Feet.

The editor of the Hospital, January 30, 1897, edition believes the difference between cold feet and warm is a difference which has an important effect upon the general temperature of the body, and an equally important effect upon both health and comfort, alike in the night and in the day. The blood, propelled by the heart, circulates, as we know, throughout the whole body. If a considerable portion of the body, like the two feet, is very cold, the warm blood has to pass through a large cold area, and it becomes cooled in passing. But in the case of cold feet, not only is the area cold, but the flow of blood, in consequence of the remoteness of the feet from the cardiac pump, is at its lowest. There is, consequently, the element of time to be considered, and, when this is considered, it is perceived how very much really cold feet may lower the whole temperature of the blood, and so of the body. On the other hand, when the feet are warm, very warm, they will not lower, but actually raise, the temperature of the blood, and thus make a very important difference indeed in the warmth of the whole body. Thinking of these things, one may readily see why a small degree of coldness in the feet may produce in some persons colic pains, and even diarrhœa, whilst a greater degree of coldness in the feet may bring about in others even a typhlitis or peritonitis. Now, it is not worth while for any of us in the present wintry season to run the risks of serious discomfort and of grave illness if we can prevent such risks. As a matter of fact we can, and ought to do, both by day and by night. We have often advised the aged and those of feeble circulation to resort to a hot bottle or to wrap their feet in flannel during the hours of sleep. Our more immediate purpose at the present time is to suggest the necessity for and a means of keeping the feet warm during the day for persons who have to stand in the street, sit in ill-warmed offices, or travel by train, and so on. Snow-shoes, india rubber snow-shoes, lined with skin, or even flannel, furnish a sovereign remedy for cold feet. The writer has been surprised at the boldness with which certain aged people, gouty men, and delicate women of his aequaintance have faced the recent snowy and slushy roads when armed, or rather "footed," with snow-shoes. The means proposed are simple, and as scientific as simple; but the comfort and safety secured by their use cannot be valued in money.

Woman and the Bicycle.

Under this heading appears in the Feb ruary number of "The Brooklyn Medical Journal," an interesting article from the pen of Dr. E. D. Page, of that city. Dr. Page recognizes the great diversity of opinion among members of the medical profession, yet takes the position that the

wheel is doing woman more harm than good, and for this reason its use as advocated and recommended by the profession should be conservative. The gist of his argument is this: Those advocating its use claim for it a development of the muscles of the arm, leg, body, chest, etc., that it makes her a stronger animal, as well as suggesting a modification of her dress that leads to less lacing and therefore better health. The Doctor claims the leg and thigh are the principle muscles developed, as arms enter comparatively little into use, except in mounting and dismounting; that the development of the chest is an unnatural one, increasing the anteroposterior diameter and decreasing the lateral diameter; that the fascination of wheeling "runs the flesh all off them from hard rides," as they say; that the abdominal viscera suffers also, in fact that the expense of energy is in excess of that acquired, as a rule, that the modification of dress is only for woman on the wheel and a real modification is one she couples with her daily life off the wheel; that the extremes of bloomer and open suits to say naught of men's suits, makes her an objeet, often of ridicule, and justly, that it lessens, often the estimation in which she is held, that all women are classed as bicycle women, that it injures her modesty which is her protection and her charm, that it teaches masturbation in women and girls; that it lends a freedom to the manner of bicycle women in summer resorts that is oft times open to comment; that it is often the go-between in her accepting the words of strange men; that thousands ride unharmed and dress modestly, but thousands don't; that riding astride is too mannish to be proper for a woman. He also calls attention to frequent abortions due to the practice and to the aggravation of already existing diseases of the pelvic organs and of the liability of setting up other troubles of the pelvic organs, (the different displacements.) Attention is called to the possible danger of narrowing the outlet of the pelvis by approximating the tuberosities of the ischia. the saddle pressing the muscles and tissues of the pelvic outlet up above their natural plane, the same influence tending to press the end of the coccyx forward also tends lessen the anteroposterior diameter of same outlet, thus shaping the pelvis for difficult parturitions later in life. This refers to girls who ride the wheel during their growing period and while the pelvic bones are comparatively soft and amenable to a molding process, say from eight to twenty years of age. This makes possible frequent symphyseotomies in the coming generation of bicycle women.

He contends that after a thorough discussion of this subject among physicians the wheel will be recommended by them with care if not disfavored altogether. That its sum total influence upon woman is degrading and that it is a professional as well as a social duty to be conservative in advocating its use.

Syr Hypophos Fellows.

(Dispensed in Bottles containing 20 oz. by weight or about 15 oz. by measure.)

Mr. Fellows takes this opportunity to thank the Profession for their increased recognition of his invention.

To the Medical Gentlemen who have kindly permitted the publication of their testimony in favour of his Hypophosphites, and who, by letter or otherwise, have expressed their disapproval of the fraudulent imitations, he is especially grateful.

With its increasing favor there has been a corresponding increase of imitations, and though this is a compliment in the sense that "only the best things are worth counterfeiting," yet Mr. Fellows would respectfully request the Profession to guard against the misleading advertisements and fictitious compounds of notorious imitators.

SAFEGUARDS AGAINST SUBSTITUTION.

Fellows' Hypophosphites is dispensed in bottles containing 15 oz. by measure —the address, Fellows & Co., St. John, N. B., blown on—the name, J. I. Fellows St. John, N. B., in watermark upon the yellow wrapper; it is hermetically corked and sealed with crimson capping; is heavy, slightly alkaline, has a pleasantly bitter taste, and deposits a flocculent brown precipitate of Hypophosphite of Manganese when left undisturbed for forty eight hours.

Note.—Though this precipitate mars the appearance, its presence has been found imperative to its full remedial effect.

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Some Ideas on Alteratives.

H. G. Reemsnyder, M. D., Ephrata, Pa.

The word "alterative" is construed by a great many medical writers as a term that can be applied to any drug or remedy of whose therapeutics not much is known, and less written. Consequently our materia medica is full of so-called alteratives, many of which are seldon used and possess an action far different from that ascribed to them, but for want of a better term are thus denominated.

According to Brunton an alterative is a drug that improves the general condition of the body, stimulates nutrition, and regulates the waste elimination without exerting any perceptible action on individual organs.

This clearly defines the therapeutic action of those drugs called alteratives, a study of which is always interesting since it is to them that much of the success in the treatment of chronic diseases is due.

The knowledge of the fact that a great many chronic diseases and conditions are amenable to treatment with benefit by alteratives is not by any means confined to the profession of medicine, but it has reached the laity and has spread through all the length and breadth of the land, as is evidenced by the general use of what are known as "blood purifiers," some of which have an enormous sale.

It is. therefore, essential to the physician to be acquainted with the drugs which are thus employed, as there is scarcely a condition of a chronic nature in which a tonic alterative will not be of benefit. Every physician must have noted that there are always a certain number of patients among his clientele who may be called "regulars," who require a course of medical treatment about once every month or two, in order to preserve their peace of mind, if not that of their body; who come with a train of symptoms, as varied and as remarkable as they themselves are, and which are withal so vague and incomplete that no earthy physician can diagnose their troubles, who, nevertheless, will be greatly benefited by an alterative which will improve the nutrition, eliminate waste, and not effect and individual organ.

Without doubt our best alteratives are to be found in the vegetable kingdom, and these have the advantage of being free from harm in prolonged administration, which cannot always be said of the indiscriminate use of such powerful mineral substances as mercury or asenic. Another advantage can be attained in the use of vegetable remedies in the preparation of the green drug, upon which point I believe almost all authorities agree.

There has been, however, on the part of our manufacturing chemists, somewhat of a tendency to ignore the demand for green drug extracts, so that it has become almost impossible to obtain reliable extracts, which are made from the green drug. However, we have one preparation of this character that experience has proved reliable, and which for certain therapeutic action is unsurpassed. I have reference to that known as iodia, which is composed of the active principles obtained from the green roots of stillingia, helonias, saxifraga, and menispermum, to which are added ferri phosphatum and potassium iodid. In theory this preparation presents an ideal formula, while in practice it produces certain beneficial results.

In addition to those cases mentioned as being susceptible to marked benefit by the use of an alterative such as here indicated, this preparation has another and perhaps more important action, that of certainly curing syphilis. I have had ample opportunity to test this remedy in cases of syphilis in all stages, and I am in a position to positively assert that in this disease we can find nothing which gives more promising effects, and which allows us to give more encouragement to the unfortunate victims.

I report a few cases that have come under my care a year or more ago, were treated with iodia, and have remained free from the disease to the present time:

Case I.—Male; age, forty-four; married; had contracted syphilis about three years before consulting me. He gave a clear history of primary sore, followed by the usual symptoms, and was treated by another physician at that time. He had possession of the prescriptions which he had been using, and they were shown me. Large doses of corrosive sublimate had been prescribed, with arsenic iodid and sarsaparilla. He seemed to improve rapidly, and after a time discontinued treatment. He consulted me for relief

from a bursa of the right elbow, which he had been treating with external applications, without relief, of course. In inquiring into his history I asked him whether he ever had syphilis. "Three years ago," he replied, "but that's all right now." I told him plainly that his present trouble undoubtedly was caused by the disease which he had contracted at that time, and that doubtless outher signs of the disease could be found. Inquiry further revealed dull pains over the region of the liver, much dull headache, and a peculiar scaly condition of the nails.

I promptly told him that he would require active and persistent treatment to overcome his trouble; explained to him that there was internal indication of syphilis, which would sooner or later be the cause of much mischief if not corrected. With the understanding that he would continue six months at least. I put him on iodia, one teaspoonful three times a day, gradually increasing to one and a half teaspoonfuls. I furnished him with a month's supply, and did not see him until some thirty days after his first visit, when he returned to my office. The bursa had almost entirely disappeared and he said he was feeling very much better "all through" since he had been taking the medicine. I gave him another month's supply and did not see him again until the medicine had been taken. No vestige of the bursa remained, and he was feeling very well, it was with the greatest difficulty that I persuaded him of the necessity for continuing the treatment. He, however, did as I requested, and at the end of six months I allowed him to cease treatment and await developments. In an interview with him a few weeks ago, eleven months after treatment was stopped, he reported himself entirely free from anything which could be ascribed to syphilis.

Case II.—Female; age, thirty-one; occupation, servant. Consulted me with the following history: Severe dysmenorrhea, itching sensation all over the body dull headaches most of the time, leucorrhea occasionly, and a general fooling of malaise and despondency. Told me that another physician had treated her for syphilis, which she had contracted several years before, at the age of twenty-six, and she was intelligent enough to know the virulence of this disease, and ascribe her ailments to it. Treatment with iodia gave marked benefit, and in due time effected a cure, the dysmenorrhea ceasing to be so severe at her first menstruation following treatment, with a total relief lasting over a year, to the present time.

Cases of this kind could be multiplied, but rough outlines are only given to acquaint the reader who may not have given this remedy a trial of its good results. I have found it especially valuable in cases requiring a uterine tonic and general tonic. Those stubborne cases of leucorrhea, ovarian pains, bearing down sensations, etc., will be found, in most cases, where there is no organic trouble, to respond to this treatment. In certain skin diseases, where there is a tendency to scaly formations, itching, or persistent ulcers, with suitable local treatment the remedy will be found a most valuable adjunct.—*Med. & Surg. Reporter, Jan. 16th, 1897.*

Treatment of Chronic Endometritis.

At the meeting of the Buncombe County Medical Society, February 1st, 1897, Dr. F. T. Meriwether read a paper upon the "Treatment of Chronic Endometritis."

He divided Chronic Endometritis into clinically three classes: The simple catarrhal or leucorrheal, hemorrhagic and the dysmenorrhaic or painful forms.

He condemned the usual routine office applications to the uterus as being certainly of no permanent benefit. One must find the cause. In the leucorrhe form the disease being in the endometrium, this must be removed by the sharp curette, using it systematically and thoroughly.

In the hemorrhagic form the curette is at once the best hemostatic and cure.

In the dysmennorrhagic form we meet with one of the most obstinate diseases existing. The cause or causes must be sought for and removed. If a lacerated and eroded cervix is present it must be repaired either by Shroeder's, Simon's or Emmett's method, the endometrium curetted, and massage used regularly, meeting all indications.

Treatment in a sanitarium, or at least under trained nursing, is almost a necessity for these cases. Castration is only to be done as a dernier resort, and after

trying all other treatment. Usually hysterectomy should also be done.

A report of cases followed.

In the discussion, Dr. Watson said he agreed with the paper in the main. He does not think tying off the uterine arteries as advocated in the paper would prove of benefit and cause atrophy of the uterus. Had not heard of performing immediate operation upon a lacerated cervix and would not attempt it. He thinks castration is often necessary.

Dr. Minor does not agree with the technique of curettage as described in the paper. He does not think it necessary to scrub out the vagina with green soap.

Dr. Burroughs thinks a great many cases of endometritis are caused by lacerations of the cervix and perineum, and in these repair of the injury, local applications, etc., will produce a cure. He does not advocate the curette, as it is painful.

Dr. David agreed with the paper, particularly as to necessity of complete asepsis in technique.

Dr. Meriwether called attention to the fact that curettage is almost upon a plane with major operations, and that no one should think of operating without an anesthetic. Immediate operation upon the cervix when lacerated is a recognized procedure, and is often necessary when the laceration is deep enough to cause profuse hemmorrhage. Ligation of the uterine arteries will usually produce an atrophy of the uterus, but he does not advocate this measure strongly. He condemns the use of the curette in one's office, and would most assuredly carry out the most stringent asepsis in operating.

Constipation not Harmful.

An editorial in a recent number of "Practical Medicine" discusses the subject as follows:

"One of the most remarkable articles we have read in some time, recently appeared in one of our exchanges. We would think but little of such an article did it not come from one of the faculty of the Post Graduate College. The writer declares that constipation, even for a long period, brings no bad results whatever. He says that it is "an experience which physicians make every day," that patients are "kept in bed for weeks without any movement of the bowels, and yet there are no bad effects."

In treating a case of chronic constipation, the author says: "It is best to tell the patient not to take any drugs and not to get alarmed if he has no movement for about a week." While such advice may be in strict accord with some new discovery in the bacteriological laboratory, yet it is precisely contrary to the experience of almost every physician who has had anything to do with practical observations at the bedside. Instead of modern methods teaching us something new in this line, we believe that they rather confirm the teaching of the old Scotch pro verb, that you will be all right if you trust in God and keep the bowels open.

At the last meeting of the Mississippi Valley Medical Association, Dr. I. N. Love, of St. Louis, expressed himself exactly according to our belief when he said; "There can be no doubt that the majority of diseases which afflict human beings, male and female, are largely dependent upon constipation."

Just in this connection might properly be added the best relief and the best cure for this condition. We refer to Syrup of Figs as prepared by the California Fig Syrup Co. Excellent, economical, and effectual.

Dr. Lawrence's Treatment of Acne Pustulosa.

A young lady, Miss Lizzie F., was having constantly recurring eruption of Acne Vulgaris, which commenced with dark red papules, which became pustular and caused pain on the least pressure. They would open, and after their contents were evacuated would form scabs with the core still there. Sometimes the core would be discharged when healing would take place rapidly. She had no menstrual or uterine disorder, which could possibly aggravate it, and it was just as bad between periods as at the catamenia. I used mercurial and sulphur ointments without success, and reaily concluded to give the case up until I tried Pineoline with such gratifying results. Two boxes were enough to cure the case, and I had her apply the third box for the purpose of insuring the cure. She had no relapse after two months.

The Charlotte Medical Journal.

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The Treatment of Chronic Endometritis.[1]

By DR. F. T. MERIWETHER, U. S. Army, Retired, Asheville, N. C.

For the purpose of considering the Treatment of Chronic Endometritis we may divide it into three classes, the simple Catarrhal, the Hemmorrhagic, and the painful or Dysmenorrhaic. It would be very interesting to study the Etiology and Pathology of this disease for its treatment especially that of the Dysmenorrhaic form is based there upon, but as all present are familiar with these, I will be forced, for lack of time to pass them by for the present. Let me say first, if I may use a paradox, that in this as in every disease its first and best treatment is prophylaxis. If we were careful to keep our puerperal cases in bed longer, and were careful in repairing lacerations of the cervix and perineum as soon as done, instructed our patients in personal hygiene of the bowels and sexual organs we would see less of Endometritis. We seldom see a case of Endometritis as such pure and simple, for ordinarily the uterus itself is involved more or less, and we usually have a case of Metritis also to treat.

In the simple Catorrhal cases occasionally we can get good results by tampons, medicated or not, and rest in bed, hot water injections and local applications. If one can control the patient perfectly, putting her to bed for several weeks, a cure may be obtained, but unless one has a sanitarium or hospital in which to treat these cases it is almost a waste of time. Hot douchings are never used properly by patients at home, and if an attempt is to be made to treat them by these measures they should be placed under the control of a trained nurse and put to bed. These are the cases usually called Leucorrhœa, in many instances this being the only prominent symptom. I know it is the custom to treat these patients by a method of routine office applications, but I must confess that I do not cure my patients by this practice and it is exceedingly discouraging to the patient, as well as to the physician, to keep up these applications, month after month with but little good, and even when benefitted, to have a relapse as soon as treatment is discontinued. A great many physicians as well as patients have reached the point when they doubt if a cure can ever be accomplished.

When we consider that the disease is in the Endometrium primarily, it seems almost useless to use local vaginal applications. It is true that Glycerine tampons will deplete the uterus, and it does undoubtedly tend to improve the Metritis present, but it is only temporarealy. We must remove the condition keeping up this irritation and as it is usually a diseased Endometrium, curettage gives the best result.

Intra-uterine medication sometimes benefits, but it is much more rational to use the curette.

In the hemmorrhagic form of Endometritis curetting is at once the hemostatic and cure. We have in these cases which are frequently, post-abortum, vegetating polypoid or fungating degenerations, of the Endometrium and it is absolutely necessary to remove these masses with a sharp curette. A few cases have been reported in which it was found necessary to ligate the uterine arteries, and even to do a hysterectomy, but it is rare that the curette does not stop the hemorrhage. And here I wish to deprecate and condemn the practice which is so prevalent of dilating and curetting patients in one's office. The technique I employ is carried out under the most careful asepsis, for we must remember that we are operating upon an organ which is very quick to absorb septic matter.

I prepare the patient as though for a

[1] Read before the Buncombe County Medical Society, Asheville, N. C., Dec. 7th, 1896.

major operation, scrub the vagina out with green soap and a brush, flush it with a bichlorid solution then with sterilized water. Instruments should have been boiled and the hands should be sterilized, preferably by Permanganate of Potash and oxalic acid. The cervix is dilated either by Hegar's or one of the separating dilators or by both, and the uterus flushed out with sterile water. Then with a sharp curette go over the entire cavity, not overlooking the cornua where the disease is apt to be at its worse, cleaning all fungosities off thoroughly. I do not think there is any danger of perforating the uterus or removing the endometrium too thoroughly with the sharp curette, for it is like it is with knives, a sharp one being less dangerous than a dull one. One knows when the muscular coat is reached by the "squeak" of the tissues and the experienced hand need not fear doing damage. From time to time the uterus is flushed out to remove clots and debris. When the uterus is cleaned out thoroughly, all bleeding usually stops at once. Ordinarily I do not pack the cavity with gauze after curetting, but if hemmorrhage be profuse, or in the hemmorrhagic cases I usually use gauze as a hematatic. The patient is kept in bed four or five days, the gauze, if any is used, being removed on the third or fourth day, a vaginal douche should be given every day for two weeks, and then every second day for a month, if possible keeping the patient in bed, or at least as quiet as possible.

In the Dysmenorrhoic form of Endometritis, we have one of the most obstinate and difficult diseases to treat, we meet with. There are patients every where addicted to the morphine, whiskey and various norcotic habits, usually induced by the physician, who feels forced to resort to something to give relief, and yet who does not look closely enough into the cause and pathology of the disease, to be prepared to give proper treatment. Almost every week we get pamphlets describing the wonderful effects of this, that or the other patent preparation, most of them narcotic and it is very tempting to temporize with these drugs while the patient goes from bad to worse. In the great majority of these cases we can find a local cause, usually a lacerated. eroded cervix, often accompanied by a diseased Endometrium. There is practically always a metretis present, the uterus is large and bulky, the cervix broad and often elongated, the Nabothian glands inflamed, often cystic, and we are lucky if the tubes and ovaries are not found to be involved. Castration is often advised and done for this condition, but unless the local disease is cured, the removal of the ovaries only augments the trouble. It is possible that in some cases adhesions and disease of the ovaries and tubes may be the primary cause of the trouble, but ordinarily the disease has travelled from the uterus to them. Just as long as the eroded cervix, diseased glands and lacerations remain, just so long will our treatment continue futile. I have removed the ovaries for Dysmemorrhrea, but as a rule my patients have not gotten well until proper attention has been given to the local disease in the uterus. Remove the diseased tissue, curette the endometrium if abnormal, amputate the cervix if much elongated and eroded, either by Shrœder's or Simon's method, do on Emmett on the cervix, and not infrequently, we can cure the metritis. If not we have removed the cause, and then by rest in bed, pelvic and abdominal massage, replacements of the uterus if displaced, hot douching, etc., we may confidently expect a cure. But it takes patience and perseverance on the part o the physician, and of the patient, and that is why we so often fail in our attempts.

I take the liberty of reporting in brief several cases showing the several types of Endometritis and the indicated treatment.

Case 1.—Mrs. M., age 26, III para. Had a miscarriage 8 months previous. Has been flowing off and on since then. In very anemic and weak and is practically confined to her bed. Uterus large and flabby, six inches in depth from the external os. Cervix reached nearly to vulva, deep bilateral laceration of cervix with erosion and eversion. The uterus was freely movable. I was tempted to repair the cervix at the time of curettage, but did not. Curetted thoroughly, removing large quantity of fungous debris, and packed with gauze. Two months afterwards the uterus was 3½ inches deep, the laceration were hardly perceptible, no erosion. After history, periods

regular, no pain no leucorrhœa is in perfect health apparently.

Case 2.—Mrs. X., age 30, married 3 years, no children. Has had leucorrhœa since girlhood. Complains of backache at menstruation, which lasts 5 and 6 days, Uterus slightly enlarged, slight erosion of cervix. I dilated and curetted, no packing. Menstruated one month later, was then regular for three months. No leucorrhœa—conceived and after delivery had a normal puerperum. After history in perfect health as far as pelvic organs were concerned. This patient had been treated for over a year by another physician with tampons and local applications without the slightest benefit.

Case 3.—Miss A., age 16 years unmarried. Has had more or less pain at menstrual period, but has been regular since comencement of menstruation three years since. Has had leucorrhœa quite profusely, and has been treated for six months without an examination. I found hymen intact, cervix eroded, and slightly everted, uterus 2½ inches long, fundus bleeds on touching with sound, endometrium quite rough. Dilated and curetted, no packing. After history, no pain, no leucorrhœa, flow regular.

Case 4.—Mrs. G. age 55, widow, menopause twelve years before. Has had leucorrhœa badly since cessation of flow, backache frequent, and occassionally a slight bloody flow, uterus 2½ inches in depth, cervix atrophied, fundus bleed on touch. Curetted and got a few very suspicious looking scrapings, but after history was one of perfect health.

Case 5.—Mrs. B. age 27, II pora. Has suffered intensely for 5 years at menstrual phriod. Usually resorts to morphia and whiskey until the flow is nearly over. Is hysterical all the time and unfit for anything. Last child 5 years old. Uterus four inches long, cervix hard, giving suspicion of malignancy. Bilateral laceration, cicatricial tissue in angles of laceration, large number of nabothian cysts, profuse leucorrhœa, tenderness over both ovaries, uterus somewhat flexed and tender. Under anæsthesia, tubes and ovaries found to be normal. I curetted dissected out the cicatricial tissue in laceration, sewed it up. Had hot water douches given daily for two months, patient in bed ll the time. After removal of sutures boro-glyceride tampons every two days were used, abdominal massage for two months, at that time uterus was moveable, menses without pain. Patient went to California and when I saw her, eleven months later was happy and in good health. Had gained 17 lbs in weight.

Of course I do not mean to say that in all cases we get these good results, for in some cases we meet with difficulties and complications which more than tax our utmost resources and patience.

When we have attempted every other possible mode of treatment, then and not till then is castration to be considered.

The Comparative Mortality of the White and Colored Races in the South.

By J. T. Walton. M. D., San Antonio, Texas.

The Negro has several things to show for his quarter century of freedom: astonishing progress, encouraging morals and intellectual improvement and an abnormally large death-rate. In late years, notwithstanding his increasing intelligence beneath his own vine and fig tree, he seems to have fallen an easy victim to disease and death.

While philanthropists were earnestly looking after him educating him, building churches for him, and otherwise contributing to his elevation, it became as a matter of peculiar moment and interest to them to know that, in proportion, he was dying twice as fast as his white brother.

Though statistics prior to the emancipation are scarce, there is every reason to believe that the colored man's death-rate has largely increased since his liberation, for as a slave he seemed hardy enough, his health being guarded by his master for obvious reasons. His physical condition today does not appear very stable or encouraging, for he is showing a striking susceptibility to disease in general and disorders hitherto uncommon to him, while his powers of resistance in seasons of epidemic seem far from strong.

Consumption, in Ante-bellum days, in a colored person was a rarity— the exception and not the rule, some observers going so far as to say they had never seen a case of it. At any rate, physicians who practised in that time are very united

in the expression that it was an extremely rare disease among the slave element. It is now, however, a very common affection, occuring more frequently among Negroes than whites. The excess in the proportionate death-rate of the colored people of this country particularly in the South where they form a large element of the population and where comparisons can the more readily be drawn, by reason of their previous condition has received the attention of some very high authority.

Prof. Robert Reyburn, M. D., of Washington, D. C., says: "There can be no doubt that the mortality of the Negroes now in this country nearly double that of the Caucasian." Dr. G. W. Hubbard, of Meharry Medical College, an institution for the education of colored physicians, located at Nashville, Tenn., states "when we consider that the death-rate among the colored people of the larger cities of the South is nearly double that of the whites, we can readily understand the importance of providing more properly prepared physicians to minister to the physical necessities of their own people, instructing them in regard to the laws of health, and by precept and example, teaching them to live on a higher and a better plain of life." Dr. Hubbard has given some time to the subject and the above statement must be taken at some account. Dr. Eugene Foster, President of the board of health, Augusta, Ga., says "the Negro death-rate in this city is about double that of the whites, and while consumption was formerly rarely met with in the Negro before the war, it is now a common affection among them." These gentlemen are in a position to be authorities upon the subject, and some weight must necessarily be attached to their views. The emancipation was a starting point in the Negro's history in more ways than one. Here began, not only his career as a freedman and the struggle for elevation, but his physical decline. A few years of freedom have very much reversed the order of things as to his physical as well as general state, so, that whether, through ignorance, neglect gradual decrease in vitality, one or severally, it is certain that his death-rate is uniformly double that of the whites and in many cases as much as three or four times as large, while in his mortality from consumption, alone, he is far in excess.

Not only is he being born in less numbers, but he is dying faster. The Negroes reputed fecundity seems rather over-estimated, if the reader will pardon the digression. The tenth census shows the following comparative increase for twenty years: Whites 61 per cent.; Colored 48 per cent. The following figures, culled from the latest census report, are interesting, if not striking: Comparative rate of increase for a hundred years, from 1790 to 1890 are as follows:

1790 to 1800,	whites	35.76,	colored	32.33
1800 to 1810,	"	36.12,	"	37,50
1810 to 1820,	"	34.12,	"	28.59
1820 to 1830,	"	34.03.	"	31.44
1830 to 1840,	"	34.72,	"	23.40
1840 to 1850,	"	37.74,	"	26.63
1850 to 1860,	"	37.69,	"	22.07
1860 to 1870,	"	34.76,	"	9.86
1870 to 1880,	"	29.22,	"	34.85
1880 to 1896,	"	26.68,	"	13.51

Average whites, 33 084.
" colored, 26.018.

It will be observed that the general average shows the Negro to be considerably in the rear, with a heavy falling off between '80 and '90. Commenting upon the previous table the census officers says "in the hundred years the whites increased from 80.73 to 87.80, while the colored element diminished from 19.27 to 11.93. The proportion of colored elements today is two thirds less than it was a hundred years ago."

In Missouri in 1850 the Negro element constituted 13.20 of the population; 1890 it had diminished to 5.61. The State of Alabama which has a population of 479,-441 whites and 468,862 colored, shows the following birth records:

1891, births per thousand,	whites	23.65
	colored	19.70
1892, births per thousand,	whites	25.18
	colored	23.36

The returns from Florida indicate a similar gain; whites, 11.15, colored 8.36. The City of Baltimore, Md., furnishes the following returns for 1893, births per one thousand, whites 20.60, colored 17.19.

Judging from the foregoing, the Negro is by no means increasing as ast as is generally supposed. If we were to allow even that his rate of increase was equal

to or greater than the whites, the product is certainly unstable, as is shown by the heightened death-rate. In 32 southern cities during '92 and '93 the mortality among Negroes exceeded that of the Whites by nearly four per cent. It would be safe to admit that the Negroe's physical state is not any better, but, if anything, worse than prior to his emancipation; and the proposition will hold good that while he has made satisfactory advances intellectually, physically he has retrogressed. The writer's observations are the result of an extensive practice in sections thickly populated by colored people. The statistics here given are taken from official sources and seem as far as possible true to the situation. Some early figures from Savannah, Ga., will prove interesting, especially when compared with later returns.

From 1854 to 1865 the death-rate was much larger among the whites than the blacks, the proportion being as follows:

1854 deaths per thousand whites 97.9.
colored 34.3.
1865 deaths per thousand whites 84.8.
colored 68.9.

The gradual increase of the rate among the blacks is obvious. In 1870 the tables showed deaths per 1,000 whites 30.1, colored 43.5. In the sixteen years intervening till 1886, this gain continues, as may be seen from the following remarkable figures: 1886 deaths per 1,000 whites 17.1, colored 49.8. From 1886 to 1893 the average annual death rate was whites 18.57; colored 43 37.

The mortality from consumption in this city is also large, reliable figures of which, however, I have not at hand. Mortuary tables of Charleston, S. C., give, in 1877, the proportion of deaths for the whites one in 44, colored one in 25. In 1886 whites 1 in 48; colored 1 in 20. I have no late returns from that city beyond the comparative mortality from consumption being in '92, eight per cent., for the whites and 13 per cent., for the colored, as related to the total mortality. The average annual death-rate for the State of North Carolina computed from the monthly report of twenty-five towns was, in 1893, whites 12.50, colored 19.80.

There were 103 deaths from consumption among the whites and 102 among the colored during this year.

The State of Alabama which has a larger negro population gives the following returns: 1891, deaths per thousand, whites 7.98, colored 8.799. In 1891 deaths from consumption, whites 318, colored 543. 1892, deaths per thousand, whites 8.65, colored 11.60; 1892, deaths from consumption, whites 318, colored 500.

From 1880 to 1894, thirteen years, the average annual death rate in the city of Augusta, Ga., was whites 16.47, colored 32.04. The deaths from consumption, were 1892, whites 21, colored 45. 1893, whites 24, colored 54. The following returns from Macon, Ga., show deaths for past ten years: whites 1605, colored 2971; difference 1366. From Brunswick, Ga., I have been able to secure only the report of mortality from consumption:

1890, whites 7, colored 5.
1891, " 4, " 16.
1892, " 6. " 24.
Average, " 5.66, " 15.

The city of New Orleans, La., which has a very high death rate, shows the following comparative mortality:

Deaths per thousand, 1892, whites 25.72
colored 39.59
Deaths per thousand, 1893, whites 24.40
colored 38.19
From consumption, 1892, whites 458
colored 447
From consumption, 1893, whites 447
colored 393

In Tennessee, February, 1893, six cities reported an average annual death-rate per 1,000 was, whites 10.80, colored 24.75; July, 1894, the death rates for five cities was, whites 10.15, colored 19.36. The mortality from consumption is also arge in this State.

The average death-rate for 17 years in the District of Columbia was, whites 18.57, colored 33.72.

The proportion in Virginia was about 2 to 3, both as regards to the total mortality and that from consumption.

Baltimore, Md., showed an annual death-rate of 19.19 from the whites, and 30.76 for the colored population. The same city shows that out of the total mortality nine per cent. of the whites die from consumption, while fifteen per cent. of the colored die from the same cause.

The annual rate per thousand in the State of Florida, in 1892, was, whites 8.04, colored 8.59. The seeming paucity here of the rates is due to influx of white invalids into this State, and also the imperfection in the returns for the blacks, many deaths going unreported.

Atlanta, Ga., in 1892, gives a proportion of deaths from consumption as related to total mortality, whites 9 per cent., colored 18 per cent. The uniform excess in the colored mortality is apparant.

To those who have accustomed themselves to regard the negro as something less than a physical giant, this will, no doubt, prove surprising information. His rate of increase is not prodigious as has been supposed, and there seems but little ground for the apprehension that the country will eventually be dominated by a "seething, surging mass of black humanity." Indeed, it is a question whether at this rate there will be ultimately any of the race left. The prediction that it would eventually become absorbed in the other race may have more truth in it than most of us want to imagine, for it is fast losing its individuality—is a multi-colored instead of a black race. The simon pure African negro is fast becoming a creature of the past in this country, and the rapidity with which he is becoming blended with the other race, taking on its mental as well as physical characteristics, suggests that he must inevitably lose himself. The consideration of the causes of this disproportionate mortality is no less interesting than the condition itself. To one acquainted with the situation of the race in large parts, it is difficult to account for the state of affairs. The question seems pertinent as to whether the transportation of the race from a native climate, a natural habitant, to a country differing in climatic conditions did not materially unfit it for residence, at least survivial here.

Miscegenation, no doubt, has worked its evils in the premises, the gradual admixture of Caucasian blood, resulting in anything but robust physique. The majority of negroes who die of consumption are of the lighter element; and a large per cent. of them will be found on careful examination with a latent tendency to the disease. Of the two elements, black and colored, the later is the most unstable. Ignorance and poverty are potent causative factors; with the former we might expect a disregard for even the most trivial laws of health, seeing how careless even educated humanity is on this point. Poverty means deprivation and crowding with all its concomitant evils. In the days of slavery, while a stranger to luxury, the negro was, nevertheless, reasonably comfortable.

His log cabin with its ample ventillation was far preferable to the dwellings which he now occupies, in many cases; he was fairly well fed, kept better hours, had good medical care and was kept aloof from many excesses to which he now abandons himself without stint. His life is now one of continuous irregularity, and the struggle for maintenance is telling upon him. However, avoiding details, the writer would offer the following as a good summary of causes bearing on the conditions named:

First, the heretofore almost general ignorance of the negro, including his want of education, special and general.

Second, lack of proper food and clothing.

Third, illy ventillated dwelling places and meeting places.

Fourth, want of medical care.

Fifth, unhealthy habits and surroundings.

The Mental Influence of Disease.*

By F. Savary Pearce, M. D., Instructor in Physical Diagnosis, University of Pennslyvania; Fellow of the College of Physicians.

The earliest conceptions of medicine were as to the therapeutic, mental, and therefore the diseases healed must have been in part mental. Aesculapius and his sons have gradually unfolded much of the intricacies—yes of the former mysteries too—of disease, and we also now know better their true causes, natures and effects upon the human economy. It follows that this selection has won the election of proper methods of treating different ailments; that one method must, as time hurries on, be soon superceeded by another more moderate one, and it must readily be conceeded, if we are to

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hope for the best results, as broad physicians, that the bacteriologist the pathologist, the physiological chemist, and finally the mental therapeutist, all have their just status in our healing art.

I have chosen the subject of The Mental effect or factor in disease as one worthy of discussion, since it is so manifest in its wide acceptation in all avenues of medical thought. It becomes one of the potent factors, too, in the cure of disease, not of nervous diseases alone, but in those general maladies coming every day under observation and so much influenced by the heriditary or acquired temperament of the patient or by his state of mind at the time he is suffering.

The question arises: Do we pay enough attention to this neurotic influence as we hurry on in general practice? Have we been won over too much toward the pessimist or by the side of the optimist as not to have allowed calmer judgment and actual experience to dictate our course in treatment; and *does* mental therapeutics avail anything? The offenses of quacks and charlatans have much affected the lay mind—yes, also, the physi cian's thought—and the practitioner is somewhat abashed or is tinctured with dubiousness, we fear, beyond his former "great expectations."

Cessation of effort is retrogration, and finding a failure to impress one patient, it should not be the guiding principle in future cases to relinquish earnest efforts.

Moral suasion, personality, hypnotism, have a *deal* to do with treatment, and presupposes nervous genesis in part, of the affections that are so bettered. Mental influences, therefore, are the causes or additions to disease and mental impressions or the personality of the physician aids recovery mightily.

We trust not to make an ideal of the nervous element in disease, but simply to place it in its proper legitimate sphere in internal medicine. By doing so, it alone can be hoped to set intelligent people aright. The physician is the one to *scintifically* cure a hysterical palsy, not the mysterious incantations at the shrine. Mental telegraphy may yet be proven to have some foundation in fact. If so, the medical profession should be the first to avail the privilege of applying it.

Mental expression gives evidences through the nerves to the muscles, and as proof of this "muscle reading" has recently been demonstrated to the writer, when it was observed that the acute experimenter discovered the hidden object by having the subject, (an intelligent physician) think intently on where the coin was hidden, while the said madipulator held firmly to the wrist of the subject. He got touch of the muscle tension involuntarily produced in the subject when approaching the object sought. This is just a counterpart of facial (muscular) expression giving evidence of inner thoughts. An involuntary act of muscle tone is inevitably produced in either case by connection with the central governing neuron, which in turn gives muscular expression to the acute sense of touch of a trained individual. It is scientific as the X Rays are scientific. Intuition must be in part an expression of ocular muscule reading; the observant one being the most successful. He unconsciously grasps the whole mental tension with his eye and analysis or reasons it out, if at all, afterwards. He seees, but does not always thoroughly analyze the image on the retina.

The following cases illustrate various phases of mental influence in diseases and are given with some particularity to this phase of the disease alone.

Case 1. Mrs. A. S., aet 20, of a bilous temperament of marked *hereditary* type (a brother had died with abscess of the liver) combined with an *acquired* nervous temperament I was called to see her when suffering from hepatic colic following several anxious weeks of extreme mental worry.

A slight indiscretion in diet together with an exhausted nervous system, had been the other inducing factors in the case. Several biliary concretions were passed by the bowels. Hypodermics had been given for the pain and milk diet enjoined. Turpentine, phosphate of soda and potassium bitartrate used as eliminants by the various emunctories which together with allaying her fear as to a gall stone killing her, and great encouragment in her extremely mental irritation, brought the woman into fair health in a week's time. The mental condition had mounted almost to a maniacal fear, yet there was a organic liver malady as a large factor in symptomatology.

This woman tells me, and she is extremely intelligent, that she has had recurrences of liver congestion for years which each time affects her mind so; and that *vice versa*, extreme mental worriment will in the end result in severe hepatalgia. This complementary correlation of mind and body is striking. The sequence is too regular to be doubted.

We make claim only that the nervous (mental) influence devitalized her vulnerable point (the liver) so that the conjoined causes expended their force there. A "rest cure" would probably stay their recurrences.

We intend using the X Ray as a possible means of diagnosis of stone in the gall bladder.

Case 2. Mrs. W., aet 48; neurasthenic for years. Received word of a serious accident to her daughter; developed in addition a tachycardia which persisted for five years up until the date of her death, a fortnight ago, which was caused simply from exhausted nerve centres, following the other mental height, extreme joy and evident satisfaction. This case presented a nervous malady, nerve exhaustion and under "mental influence," it soared even to the death of the patient.

How many examples could you, gentlemen, refer to where worry and depression have killed a loving mother, and how frequently the exalted joy brings on the neurotic faint, by reflex-action on the myocardia through the vagi. Again, does not mental depression produce hysteria or paralysis of will power, and more infrequently a motor palsy similating closely organic disease? Dr. Weir Mitchell has described in The Medical News* some of these rare forms which I have had the privilege of studying.

Case 3. I have recently seen with Dr. J. Madison Taylor, Miss A. S., (a single woman with hysterical paraplegia of eight years duration) get up and walk forty feet after a two month's course of regulated massage, electricity and mental therapeutics. Could much of this be other than mental impression?

True, her physical condition gained much, but is not accoutable for the major part of the cure. The neurotic element was paramount. The kneejerks are absent in this woman, making symptoms of possible latent organic cord disease also.

Case 4. Another woman with a chronic dysentary was told, "If your disease was the same as Mrs. A's (who lay in the next bed in a hospital ward and whose condition the first patient thought resembled her own) you would be dead in several weeks," promptly had an extreme exasperation in her organic dysentary and was set back weeks in her ultimate recovery.

Case 5. Mrs. M., aet 56, Paralysis Agitans, of over two years duration; has a marked fine general tremer. A tonic line of treatment (nux vomica and rest) together with Tr. Hyosciamus, of each five drops, t. d. has controlled in large part the movements. So soon as this patient becomes mentally excited or irritated from any cause, the tremor is made violent—stomachic pain developes. The opposite soothing mental conditions quiet the tremor greatly. The neurotic or mental effect in this delicate woman is apparent in all her actions, and yet she suffers from what we know to be an incurable malady.

Case 6. A colored girl, aet 17, (with some white blood in her veins,) is one of neurasthenia. She is always extremely depressed after the Sunday sermon by her exhorting minister, whether the talk is of a blaming or reassuring nature to the congregation. She is, therefore, always more depressed on Mondays. We had some difficulty in tracing this periodical exacerbation.

Case 7. A. B., seen by my friend, Dr. A. G. Thomson; who kindly gave me these notes of the case. The patient was a bright girl—had been a skilled performer on the piano. Two years ago she developed rather insidiously a well marked writer's palsy (occupation neurosis, so-called) of the right forearm. The member would become tired easily, would pain her on usage and the fingers became clumsy and stiff, so much so that she gave up writing entirely; for the pain and spasm of the muscles of the hand and arm became unbearable on persistent use. This girl was apparently not of neurotic type. I forgot to say there was no anæsthesia, but a sense of tingling in the fingers, and no great tenderness of nerve trunks, only "muscle soreness." Here is a picture of writer's cramp, truly.

*1895 Vol. LXVII, 197-232.

For the last six months she had to give up the piano also. The girl was faithful to the well prescribed treatment of massage and glavanism, tonics and rest, but after six months there was no relief of her symptoms and the diagnosis was still confirmed by good authority. There was no reason to suspect hysteria, and the clinical features were not that of hysteria.

In fine, this girl was finally advised by a friend to give up doctors and to go to a professional hypnotist, who placed her only in the lethargic stage and suggested that the arm would now be better. This was followed by improvement, the subjective pain on usage lessening. After the second seance the pain had much lessened. With three or four more hypnotic seances, she found she could use the hand quite well, but it was feeble compared with the other member. Up to September, 1896, this patient had entirely recovered and remained so.

This case forces the conclusion which is upheld by a recent writer (C. H. Hughes, Alienist and Neurologist, XVII, 4, Oct., '96,) that there is an underlying "neuropathic. organism" in most subjects. We add to this that such neurotic element may be acquired by the nature of the work itself, which, in this girl, was happily gotten rid of and the little organic change, too, made a spontaneous recovery by nature's method—regulated exercise and restored nutrition.

Case 9. W. R. M., aet 30; morphiamaniac. He claims the habit to have been established by his physician giving him hypodermics during the course of a rheumatic fever. I knew this man from boyhood. He was born in good circumstance but never had any idea of resistance to passions. There was not, in the first place, the mental calibre to withstand pain, hence in his acute agony of rheumatism it became necessary to administer morphia.

The mental impression in his vacillating mind was the cause of his later developed mania. True pain was substituted by mental pain, and he would go through torture almost in his efforts to give himself a hypodermic of three grains of morphia with a needle as dull and rusty as a stub pen.

So it is, manifestly, with all the drug manias. "Restraints and self-restrains" are not powerful enough as the governor of those perverted intricate human beings. Heredity tells much as to prognosis, but now and then an aberrant mental make-up crops out in a theretofore powerfully resistive lineage.

As weakened mentality is often the cause of these drug manias, so is morale a potent factor in alleviating, seldom in curing them. The "Keely Cure" is an unrecognized mental impression on the inebriate. It abates the habit for the time being, and gain in physique assists resistence to alcohol for a greater or less time.

Case 10. Mental heredity outside of recognized nosological classification is also interesting.

A minister recently told me of an Indian theological student, who had been taken literally from the squaw's back, who occasionally disappeared for three or four weeks from the seminary, and was again "back to his books with downcast looks." Finally a detective was put on this fugitive itinerant, and he was found to have isolated himself off in the woods, the life of a savage. This red man graduated as an Episcopal Clergyman, and finally went back to his tribe in the Dakotas.

If mental or mind influence is so potent in heredity, it is none the less remarkable if acting largely in the symptoms of a diseased body.

Case 11. We have just been examining for Dr. S. Weir Mitchell, the urine, critically, for uric acid in various diets in a case of extreme neurasthenia.

This professional man got an idea that he had Bright's disease from the care taken by the nurse in receiving the specimens, and became greatly depressed as to his respiro-circulatory organs. On informing him that it was merely a "study" and that his kidneys were healthy, the heart came down 20 beats per minute and in 12 hours the whole expression of the case had changed, and we trust the rest treatment will bring him up to normal health.

Case 12. Dr. Morrow J. Lewis tells me of an overworked nurse who had been dipping a patient six to eight times a day with the Brandt treatment, of acute typhoid fever. She sprained her wrist and in 24 hours the whole arm to the elbow became anæsthetic. She had no pain along the nerve trunks, however, which set aside neuritis, while the segmental anæsthesia

placed it in the neuroses category (hysteria), a mental impression.

In epilepsy the attack is often precipitated at times by excitement. This is well marked in an epileptic brother and sister; in the former of whom his parents persist the attacks are worse on an approaching storm. This is not quite clear as to the effect, but it would seem reasonable to suppose the gloomy weather depressed the boy mentally, and that the explanation of the attacks that follow the same evening were due to the much lowered mental inibition from the unconscious strain. This lowered mental inhibition will also fit as the cause of more frequent nocturnal attacks of epilepsy found in the majority of cases, for during sleep volition's powers of holding in check (often manifest in the waking state) is wanting.

Dr. H. C. Wood wisely exhorts the classes at the University to make an Irishman's cathartic senna, etc., in order to get the double action physical and mental. A large stool means relief to the patient's anxiety, at least.

I am quite sure that many more cases of abortion in nervous women should be traced to worry or a sudden mental shock. How quickly will the cloudy day, or bad news, effect the melancholical predisposed individual. The sudden transitional conditions of life in the spring may account for the prevalence of this melancholia in the spring.

We all know very well the experiments that have been performed to prove the mental influence in *producing* disease: How the prisoner was blindfolded and told he was to be bled to death, then pricked in the arm and warm water allowed dexteriously to fall in a pail until his life ebbed away with the imaginary bleeding; also how the robust man has been made (mentally) very ill by a set number of persons accosting him as to his extreme ill appearance. He not only became sick at heart, but a continued fever was developed thereby.

Do we ever see a woman with oblated ovaries that is well? It must be extremely rare. The mental impression as to the loss of her organs of generation prematurely explains away her multitudinous symptoms, when no remaining organic trouble is coexistent.

What more wonderful, yea, we are apt to say miraculous, thing is hypnotism? Hypnotism can be induced in the strongest minds.

Placing a patient unconsciously in lethargy, catalepsy, and somnolence has proven a part of the treatment of disease. Why the experimenter can so influence a subject, we know not. That he can even make suggestions to be carried out in the post-hypnotic state is proven beyond doubt.

These psycological phenomena, as yet in their infancy, open up broad fields in mental medicine, and should be judiciously guarded by statutes.

How many new fields for seeing and thinking are open to the modern physician!

In the psycological lines alone, we have endeavored to point out some above in the paper today.

Another instructive case bearing on a point already referred to and I leave the subject for expression of opinion.

Case 13. Dr. B. F. Baer informs me of the patient; a woman aet 26, upon whom he had performed hysterectomy and ovariotomy for organic disease and in whom a persistent post-operation abdominal pain continued which incapacitated her for all work, and who, after recent aetherization, was *completely cured* by an incision at site of original wound, with the attendant formality of two weeks in bed, as the finale in the "mock" operation precedure.

The thirteen cases here detailed need not be added to, to verify the statement that the physician, to be abreast with the times, must know all the causes of diseases, all the symptoms, every detail and new remedy in treatment.

Then a few drugs studied well, gentlemen, the proper moral understanding of our cases, and application of the "suggestion" will bring the more gratifying results in the most difficult and most interesting work in life—the practice of medicine.

Some of the Uses of Gelsemium Semperviens.

By F. R. Millard, M. D., San Diego, Cal.

I have long been convinced that the doctors called regulars make far less use of elsemium than they well might. any years ago, while trying to serve

God and my fellow man as a lonesome country doctor in the Mississippi Valley, I became very partial toward it. It seemed that an undue share of the incompetent and unfortunate, who must be treated gratuitously fell to me. If they could not accumulate gold or silver, they could accumulate whole housefuls of children and malaria, and with the nearest drug store 45 miles away, and quinine five dollars an ounce, the cost of drugs used was an item not to be despised. It was found that by its judicious use from 50 to 75 per cent- of quinine could be saved, and the patient cured just as quickly. Of course the cost does not cut so large a figure now. But the fever is far less likely to return than when quinine, or quinine and arsenic are relied on. And this was another item worth looking after, when every visit meant a ride of 18 or 20 miles.

To infants, its administration should only be intrusted to a careful nurse. To older children and adults, it can with perfect safety be given until there are symptoms of oculo motor paralysis, with dilated pupils. Its curative power in malarial fevers has long been known, but I have no knowledge of any studies of its effect on malarial plasmodia, and it seems to me this is a point well worth working out. In obstinate neuralgias, and in incurable diseases where opiates must be given for a long time, it is always well to combine gelsemium with the opiate, as a smaller dose is required and the resulting action is not only more agreeable, but more prolonged. Besides, [and this is of no small importance,) the formation of the opium habit is materially delayed. For dysmenorrhœa, it is one of our most valuable remedies for use during the attack, but should not be relied on to cure the patient. For alleviating the pain opiates should be avoided if possible. Several of the coal tar derivatives will render the woman comfortable, and when they have been trade marked by some German speculator for our special use it seems to be strictly in the line of the higher (or newer) ethics to prescribe them. But none of them are emmenegogue or in any sense curative of ths condition.

Not infrequently cases of dysmenorrhœa, with scanty flow, are seen, in which a rheumatic taint is a prime factor. Then salicylate of soda and gelsemium in full doses until the flow is free, then omit the salicylate and continue the gelsemium until pain is gone. During the intermediate time

℞ Iodide of potash..... ℥ss
Red iodide of mercury..... gr. x
Simple Syrup..... ℥iii
M. et. solve.
Add Syr. sarsa. comp..... ℥iv
Fl. ext. black cohash..... ℥i

S. Take a teaspoonful after each meal, will seldom fail to satisfy both patient and doctor. Occasionally it is desirable to administer the salicylate to women who are pregnant, but it has so strong a tendency to cause the uterus to throw off the product of conception, that it can seldom be continued a sufficient length of time. It may be worth knowing, that if gelsemium in full doses is combined with it in a large minority, perhaps in a majority of such cases it may be given as long as it may be required. In almost all painful conditions it may be used with bromides, when they are needed.

In many cases of obstinate cough, especially if there is soreness in the chest, 3 or 4 drops of the fl. eqt. 4 times a day, and one fifth gr: of calomel half hour before meals will often do more for the patient in four days, than can be done in four weeks with sudorific expectorants. Cases of tetanus have been reported as cured by gelsemium as the only remedy used.

That gelsemium internally, and the constant application of lobelia tincture to the wound and adjacent parts will dissipate tetanic symptoms, after mastication of food has become impossible, I have proved in several instances. This result cannot be expected, unless it is given in sufficient quantity to produce a good deal of muscular debility, and widely dilate the pupils and render distinct binocular vision impossible, and this condition must be maintained until there is decided amelioration of all tetanic symptoms.

Two Social Problems from Psychical Standpoints.*

By James Weir, Jr., Owensborough, Ky.

One of the greatest scientists, as well as one of the most profound thinkers, that the world has ever known, Thomas

*Delivered under the auspices of Alpha Chapter, Phi Chi Society, at Louisville Medical College, January 15th, 1897.

H. Huxley, writes in his preface to "Science and Christian Tradition," as follows:

"I have never 'gone out of my way' to attack the Bible or anything else; it was the dominant ecclesiasticism of my early days, which, as I believe, without any warrant from the Bible itself, thrust the book in my way.

"I had set out on a journey, with no other purpose than that of exploring a certain province of natural knowledge; I strayed no hair's breadth from the course which it was my right and my duty to pursue; and yet I found that, whatever route I took, before long, I came to a tall and formidable looking fence. Confident as I might be in the existence of an ancient and indefeasible right of way, before me stood the thorny barrier with its comminatory notice-board—'No THOROUGHFARE. By order. Moses.' There seemed no way over; nor did the prospect of creeping round, as I saw some do, attract me. * * * * * The only alternatives were either to give up my journey —which I was not minded to do—or to break the fence down and go through it." Huxley found that this Mosaic fence, as erected by dogmatic theologians and scholasticists, was but a flimsy structure at best and one that was easily overthrown and destroyed. Dogmatic theology teaches that man was created from the dust of the earth, and that he at once fell heir to an estate of physical and psychical habitudes that were God-like in character; scientific investigation, on the contrary, demonstrated the fact that man's inception begins in bathybius protoplasm and culminates, as far as his general physical organism is concerned, in the last link of an evolutionary chain that reaches back and back through countless æons of ages to the very beginnings of life. The History of Life written upon the rocky frame work of this gray and hoary old world, declares that man's physical being is but the result of the laws of evolution. He did not spring into being, like the sea-born Venus, a creature of physical grace and strength and beauty; nor did the sacred flame of an inborn intelligence at once illumine his countenance. For thousands of years the forbears of the present civilized *homo sapiens* were but slightly above the *Alalus* (ape-like man) of Haeckel in point of personal pulchritude; and for thousands of years the ancestors of the civilized man of today were savages with all the psychical traits of primitive peoples.

Social ethics are as much the result of evolutionary growth as is man himself. Civilization, which is but another name for ethical culture, is the outcome of the inherited experiences of thousands of years. These experiences were the results of law, and that law can be embraced in one comprehensive word—evolution.

Now, one of the most noticeable facts in biological history is the tendency that animal structures or organisms, under certain circumstances, have towards atavism or reversion to ancestral types. Not only is this to be observed in the physical organisms of animals, but also in their psychical beings as well. And this brings me to the subject matter of this lecture, "Two Social Problems," which are, in my opinion, the direct results of physio-psychical atavism.

The first of these to which I will invite your attention is the Rioting Striker. I do not propose to answer this problem; I merely wish to show you its probable cause and its effects. When we come to examine the history of the world we find evidence that certain nations have, at times, reached a high state of prosperity, and then have degenerated to such a degree that they have lapsed into a state of semi-barbarity, or have passed entirely out of existence. This has generally been brought about by conquest, but the races conquered had first become enfeebled by their habitudes of thought and manner of living. It is a well established fact that inordinate luxury brings debauchery, and that debauchery occasions degeneration. All nations that have, heretofore, reached the zenith of their prosperity, have been engulphed, at sometime or other, in the mælstrom of luxurious habits, and have fallen under the lethal influence of a degeneration occasioned solely by debauchery; for the luxury and debauchery of one class brought increased poverty on, as well as excess in, other classes, and poverty and excess are prominent factors in the production of degeneration, as we shall see further on in this lecture.

Krafft-Ebing says, in *Psycdopathia Sexualis*: "Periods of moral decadence

in the life of a people are always contemporaneous with times of effeminacy, sensuality, and luxury. These conditions can only be conceived as occurring with increased demands upon the nervous system, which must meet these requirements. As a result of increase of nervousness, there is increase of sensuality, and, since this leads to excess among the masses, it undermines the foundations of society—the morality and purity of family life. When this is destroyed by excess, unfaithfulness and luxury, then the destruction of the State is inevitably compassed in material, moral, and political ruin."

Such was the condition of the Latin race when the fierce and hardy Vandals over ran the Roman peninsula; such was the condition of the Assyrians when Eabylon fell beneath the onslaughts of the great Macedonian; such was the condition of the Egyptians when the northern myriads swept down upon the fertile valley of the Nile and destroyed forever the once powerful and all conquering kingdom of the Pharaohs; and such too was the condition of the French nation in 1794, when anarchy unfurled its red banner at the head of the most gigantic social revolution the world has ever known.

At the present time, community of interests as well as higher civilization, would utterly forbid the total subjugation of one civilized country by another such as occurred in the olden times; hence, no nation need fear annihilation from such a source. The danger comes from another point and consists in the almost certain uprising, at sometime in the future, of degenerate individuals (and in the van will be found the rioting striker) in open warfare and rebellion against society. The question whether the world is growing better or worse is often debated, and can be answered affirmatively on both sides. Better, because superstition, bigotry, and dogmatism have given way, to a great extent, to the tolerance and freedom of higher civilization and purer ethics in normal, healthy man; worse, because crime (and I mean by crime *all* antisocial acts) has greatly increased on account of the pernicious influence of degeneration. That superstition, degenerntion, and bigotry are on the wane, and that they will, sooner or later, be entombed in that depository of obsolete savage mental habitudes—absolute and utter oblivion—a glance at the success that science has achieved in the warfare waged against it by the Church, will at once declare. (Throughout this paper I use the word Church to express dogmatic and intolerant priests and scholasticists of any and every denomination, whether Jew, Gentile or Pagan, Protestant or Catholic).

A short incursion into this subject, *i. e.* the Church's warfare on science, is absolutely necessary, for the triumph of science over its enemies—superstition, bigotry, and dogmatism, coincidently, ignorance and illiterateness—show that the normal civilized world, at the present time, is markedly different in many respects from the world of ancient, mediæval, and even comparatively recent times; and, in summing up, this changed condition will be a mighty factor in elucidating the two problems that I am discussing. When Olympus first faded away from the enlightened eyesight of the Greeks, and changed into space besprinkled with stars; when Zeus no longer held his divine court on its mystic summit; when oracles became mute and the fabled wonders of the Odyssey either vanished or resolved themselves into prosaic common-places under the investigations of the sceptic or the accidental discoverer, the Church made a strenuous protest against the destruction of its traditions. Some of these early seekers after truth were exiled; others were killed and their goods confiscated. The Church issued its edict against heresy (and any doctrine that taught a belief antagonistic to the accepted tenets of pagan mythology and theogony was heresy), and hurled its anathemas against the heretic.

Olympus, in the eyes of the Church, still existed, and Zeus, the man-god, still quaffed the sacred ambrosia in its shady groves. The Sirens still sang their entrancing songs, while Scylla and Charybdis were ever stretching out eager arms toward unwary mariners. Gigantic one-eyed Cyclops, with Polyphemus as their leader, still patrolled the shores of Sicily and kept their "ever-watchful eyes" turned toward the open sea. The Church held that these wonderful monstrosities were actualities and that a belief to the contrary was rank heresy. But the hardy Greek sailor landed on the Cyclopean

island and discovered that Polpphemus, and Arges, and Brontes, and Steropes, and all the other one-eyed monsters were nothing but sea-wrack, boulders, and weeds. He sailed farther, past Scylla and Charybdis, and discovered no greater dangers than sharp rocks and whirlpools. Yet farther he sailed out into the mysterious sea, and the only Siren's songs he heard were the lullaby of the waves as they kissed his vessels prow and the whfstling of the wind as it played æolian fantasies on his taut and well tarred cordage.

In vain the Church thundered against the daring investigator; neither fire, nor sword, nor imprisonment, nor death itself, could check the march of truth. Mythology and pagan theogony had received their death-blows; superstition, bigotry, and dogmatism were elbowed aside and gave place to dawning science.

In its battle with superstition civilization has grown strong, hardy, and, above all, vigilant. This last quality it will need most of all in its coming battle (which battle, in my opinion, will be started by the rioting striker) with the combined hosts of anti-social degenerates.

I believe that we are rapidly hurrying toward a social cataclysm, beside which the downfall of the Roman Empire, the destruction of ancient Egyptian and Babylonian civilizations, and the bloody days of the French Revolution, will sink into utter insignificance. I believe also, and think that I can demonstrate the truthfulness of my belief, that the inciting cause of this social revolution will not be found in those citizens of the United States of Anglo-Saxon and Celtic parentage, but that it will be observed among our Slavonic, Teutonic, and Latinic citizens. But, in order to furnish a parallel (from which you may draw your own conelusions) before I enter fully into the discussion of this part of my subject in which the rioting striker plays the most prominent role, I wish to review, very briefly, certain historical epochs.

When the first conquerors of Egypt, about whom history can tell us so little, first occupied the fertile valley of the Nile, the country, in all probability, was inhabited by negroes. The conquering race drove out or enslaved the native population and founded the ancient kingdom of Egypt. This kingdom waxed strong and mighty until at the time of Rameses the Great, more than three thousand two hundred years ago, it was the most powerful monarchy in the whole world. The mighty son of Ra, Meiamoun Ra, or Rameses, as he is most generally styled, was a warrior and a statesman. He led his victorious troops North, East, and West, conquering nations as he went, until he dominated and brought into a state of vassalage over two-thirds of the then known world. Wealth flowed into his kingdom from all the surrounding countries, consequently luxury, with its never failing associate, debauchery, made its appearance and the decadence of this mighty kingdom set in. It is true that many Pharoahs reigned after Rameses, and that the monarchy maintained its greatness for a long period of time, but luxury had taken hold on the Egyptians at the time of their greatest prosperity and had sown the seeds of degeneration, which flourished and grew apace, until the emasculated and effeminate people yielded up their independence to the conquerors, and passed out of existence as a nation forever.

The Roman people, under the leadership of their ancient heroes, was a nation of hardy warriors and husbandmen. That pre-eminent military genius, Julius Cæsar, had carefully fostered this warlike spirit in the bosoms of his compatriots, and by a series of brilliant campaigns had made the Roman nation the most powerful on the face of the globe. The Roman legions were not only victorious on land, extending their conquests into Iberia, farther Gaul, and still farther Brittain, but the Roman triremes also swept the Mediterranean, from the Pillars of Hercules to the shores of Syria and Egypt. Wealth poured into the country from all sides and the people revelled in a boundless prosperity. Luxury had already begun to enervate the hardy soldiery at the time of Cæsar's assassination, yet not enough to show the full effects of degeneration and demoralization. The empire under the first Emperors steadily grew richer and more powerful, and the luxury of the rich more unlimited and licentious. At length a change can be noticed. The Roman legions, hitherto victorious over every foe, are now frequently vanquished; conquered tribes uprear the standard of revolt and refuse to pay tribute; the ter-

ritorial boundaries of the empire materially shrink, and its once conquered provinces pass out of its dominion forever. The gradual degeneration of this nation is faithfully mirrored in the character of the Emperors who governed it. Nero, Caligula, Tiberius, Caracalla; and Messalina, the depraved wife of Claudius and the daughter of Domitia Lepida, herself a licentious and libidinous woman, were but accentuated types of the luxurious and debauched nobility. Not only did the nobility become victims of degenation, but the poorer classes also lost their virility, until at last we find the stability of the nation preserved through the instrumentality of foreign mercenaries. The greatness of this once wide spread empire dwindled away, (the freedom of its institutions contracting along with its shrinking boundaries,) until we find it lapsed into a state of barbarian despotism under the son of Aurelius; and, had it not been for outside influence, it would have eventually fallen into a state of utter and complete savagery.

Now, let us turn to a recent civilization. At the time of Louis XVI, the French nation was thoroughly under the influence of degeneration consequent to a luxury and licentiousness that had had a commutative action for several hundred years. The peasantry and the inhabitants of the faubourgs, owing to their extreme poverty, itself a powerful factor in the production of degeneration, had lapsed into a state closely akin to that of their savage ancestors. The nobility are weak and effeminate, the majority of them either sexual perverts, or monsters of sensuality and lechery. The middle class, as ever the true conservators of society, seeing this miserable state of affairs, attempted to remedy it. Not fully understanding the danger of such a procedure, they allowed the degenerate element to share in their deliberations. Their moderate and sensible counsels were quickly overruled by their savage associates, who brought about a Reign of Terror (with such psychical atavists as Marat, Danton, and Robespierre at its head), the like of which the world had never seen before nor has ever experienced since.

I have demonstrated, in the three instances of history just cited, that degeneration has invariably followed luxury, and that a social and political cataclysm has been, invariably, the result of this degeneration. That certain classes of the Old World and of the New World also arlivin ag in inordinate luxury; and that certain other classes are, even now, struggling in the very depths of poverty, is a well known fact. That this state of affairs is rapidly increasing the percentage of degenerates, such as sexual perverts, insane individuals, and congenital criminals, is not generally known; yet it is a woeful truth.

Now, the doctrines of communism, socialism, and nihilism are essentially degenerate and atavistic doctrines, inasmuch as they revert to a state of society existing thousands and thousands of years ago, when all men were savages. It is only by a study of primitive folk as we first found them that we are enabled to form any idea of our own status before civilization raised us to our present elevated position. It will hardly be necessary, in order to demonstrate this proposition, to cite more than one instance of communism as it was found in a race of people when first discovered; therefore, I will call attention only to a single tribe of communists, the Alentians, living on our own continent. It is a mistaken idea to suppose that, in the beginning, man was isolated and lived apart from his fellow being; our savage ancestors began with a communal life, and, instead of the individual being the father of the commune, the commune has been the father of the individual. In the *kachims* of the Alentians we see the autotypes of the communal dwelling-places of our savage ancestors; likewise, their customs and beliefs have their architypes in the political and social economies of our primitive forebears. It is to some such state of savage irresponsibility that the doctrines of Bellamy and his followers would hurry us in the end, if they were carried out to their full extent. Man would have to lose, necessarily, that individuality and responsibility which he has acquired through thousands of years of inherited experiences. Could he do this, he might attain to the Utopia described by Bellamy, and become the autotype of the ant and the bee and others of the social hymenoptera. But he can never do it without losing that which makes him immeasurably superior to the sava
civilization. Civilization, in its

demands an individualism totally inconsistent with the tenets and doctrines of communism and socialism. The innate *ego* of civilized man is too self-assertive to allow him to banish it for any length of time, and, since his psychical development is always on the increase, it will ever be growing stronger and stronger. The surroundings demanding the communistic customs of our savage ancestors no longer exist, and a belief in any such doctrine at the present time is, unquestionably, an instance of psychical atavism. Fortunately for civilization, the majority of mankind are not degenerate; therefore these atavistic tendencies of the minority are held in check. Every now and then, however, the degenerate element bursts through the restraining bonds of social laws and customs, and makes its savage nature apparent in rioting strikers or boycotts in which lawlessness and anarchy are abundantly in evidence. Any man has the right to stop work whenever he wishes, if he is not under contract and can legally do so, but no man has a right to stop another man from working when he desires to labor. Such an act would be clearly anti-social, therefore criminal. It is here that the rioting striker shows that he is the atavistic offspring of degeneration, for the strikes of today are invariably accompanied by anti-social acts which at once place them among the *instrumenta belli* of the savage. Arson, murder, and theft belong to the cardinal virtues according to the tenets laid down by savages and moral imbeciles, and arson, murder and theft invariable march in the van of the riotous strike. Communism and socialism must necessarily form a factor in any movement of labor against capital. This fact is always bitterly denied by the more conservative and politic of the labor leaders, yet the active strikers, who engage personally in the strike, unhesitatingly assert their main object is to place themselves more nearly on a par with their wealthy neighbors. When we come to examine the personnel of a striking mob, we at once see that it is made up, to a great extent, of foreigners and descendants of foreigners. And when we examine such individuals we will discover that they differ, more or less, from normal man, and that these abnormalities in face and figure form a distinct type. These abnormalities are the unmistakable signs of degeneration. Of course I have reference to the rioting striker: throughout this paper I mean no other. Now there is a cause for this degeneration.

For thousands of years the struggle for existence among the lower classes of Europe has been exceeding hard. On account of the numerous wars during the last millenary period, the burden of taxation has been very heavy, rents have been very high, and the consequent struggle of the laboring classes for a bare existence has been very severe. Physical development has been retarded, and even turned back, and psychical atavism has made its appearance. Both mind and body have retrograded.

The phenomenon of atavism or reversion occurs in feeble types; microcephalism and dolichocephalism with a flattening of the cranial arch and corresponding loss of capacity in the skull—types that we see everywhere among the individuals now under discussion—are examples of the physical signs of atavism.

The native-borne American workingman, descended from Anglo-Saxon or Celtic ancestors, has not yet been attacked by degeneration. In this fruitful land his struggle for existence has been comparatively easy; consequently his physical and psychical beings have not been held in check and turned back by the exigencies of his surroundings, but, on the contrary, have been greatly developed. He takes broad and elevated views of social questions. He recognizes the fact that each man is the architect of his own fortune, and that success depends on the intrinsic worth of each individual. In fact, he is the product of a higher civilization, which declares that the individual, and not the commune, is the great desideratum. He knows that labor is a marketable commodity, and that it will always bring a certain price unless the market becomes overstocked. And now we have arrived at the key of the whole situation; the market is overstocked and that too by an army of degenerates who are ready for any form of lawlessness and riot, suggested by their essentially anti-social natures. A mere casual survey of the histories of the various strikes which have occurred in the United States, will show that an overwhelming majority of the individuals conducting the strike were foreigners or decendants of foreigners.

It is true that there are native-born descendants of Anglo-Saxon and Celtic ancestors in the ranks of the strikers, but they are few in number, and are uniformly led on by emotions and desires founded on higher principles than those which actuated their Teutonic, Slavonic, and Latonic associates. These men are amenable to reason, and do not commit acts of lawlessness unless forced to do so by their anarchistic fellow-strikers. The fear of bodily harm or the fear of being considered a coward has made many a law-abiding man a criminal. In support of the truthfulness of the above proposition, I will state, with pardonable pride, that two years ago I made like assertions in the columns of the Century and today, The League of American Workingmen, numbering thousand of members, indorses them in a most flattering manner; they have incorporated them, word for word, in their declaration of principles. This is a compliment indeed, for I do not pose as a reformer, I simply study strikes and strikers from a physicians standpoint and make my diagnosis just as I would in any other case requiring anatomical, physiological and psychiological study and research.

The psychical habitudes of a few of the individuals under discussion have been inherited from ancestors who have always been of low types, but the majority of them are *bona fide* degenerates, made so by inheritance as well as by their surroundings. The Russian and Bohemian laborers who immigrate to America are, and have been for a long time only semi-civilized, but the Italians, Germans, Huns, Poles, Frenchmen, and Austrians who are to be found among rioting strikers are clearly a degenerate class of human beings. The skilled morphologist can detect the physical signs of degeneration in these people at a glance. Their physical characteristics mark them out at once to be abnormal types of the human race with such a striking family resemblance that individuals of entirely different nationalities look alike. This same family resemblance is to be found among congenital criminals. In point of fact the congenital criminal and the anarchistic striker, both victims of degeneration, differ very little. The congenital criminal's anti-social acts are generally individual, while the anti-social acts of the rioting striker are communal or collective. Of the two individuals, I consider the striker by far the more dangerous to society. The rioting striker is a savage and is not amenable to those arguments which would undoubtedly prevail were he a normal civilized human being; consequently it is folly to argue with him. His ideas of social economics is entirely different from those of the civilized world, and the sooner the world recognizes this fact the better will it be for civilization.

Year after year, practically without restriction, thousands of these antisocial men and women have swarmed into our country, until we, comparatively speaking, a nation just born, contain more of these undesirable citizens than any of the older nations. In point fact, if the statistics of the League for the Restriction of Immigration are correct (and I believe that they are) the United States contains sixty-five per cent. more than her rightful share of degenerates; the Old World has gotten rid of these people as rapidly as possible by unloading them on our shores. They still continue to enter our gates and their children born in America, are being added to their number. Some day—and I greatly fear that day is not very far distant, some professional striker (for there are professional strikers) will consider that the time is ripe for rebellion, and, raising the frandulent cry of "Labor against Capital!" instead of his legitimate cry, which is "Rapine, Murder, Booty!" will lead this vast army of degenerates against society. This social cataclysm may not occur for many years, yet the agencies through which it will finally be evolved are even now at work, and are bringing the culmination of their labors ever nearer and nearer as time passes.* Many years ago, a French philosopher, Detocqueville, wrote a book on American institutions in which he prophesied many things about this republic which have come to pass; among other things, he said that if this government was ever overthrown it would be by the hands of

*It will be remembered that I called attention to the fact that, in the warfare between the Church and Science, civilization has gained a watchful vigilance which would effectually guard it against surprise. When this social rebellion does occur, it will be promptly met and successfully overcome: for normal healthy man has been taught by bitter experience what to expect from the rioting striker, and the manner in which he is to be treated.

Anarchy. It is to be fervently hoped that, in this at least, he may prove to be a false prophet.

Now let us turn our ateention to another social problem, and one which, in the near future. we will be forced to meet—I mean the Female Suffragist.

In the begining woman was, by function, a mother; by virture of her sur roundings, a house-wife. Man was then, as now, the active dominant factor in those affairs outside the i nmediace pale of the fireside. Life was collective; "communal was the habitation, and communal the wives with the children; the men pursued the same prey, and devoured it together after the manner of wolves; all felt, all thought, all acted in concert." Primitive man were like their simian ancestors which never paired, and which roamed through the forests in bands and troops. This collectiveness was plainly noticeable in certain races of primitive folk when first discovered which are yet in exis–tance, notably the autocthons of the Aleutian Islands mentioned in our discussionof the rioting strikers. Hud-dled together in their communal *kachims* naked, without thought of immodesty, men, women, and children shared the same fire, ate from the same pot, and slept in the same bed. Community of wives was at first common to all races of primitive men, but, after a time, there arose certain influences which modified, to a certain extent, this peculiar marital condition. Frequent wars must have oc-curred between tribes of primitive men, during which, some of them (physically or numerically weaker than their op-ponents) must have been repeatedly van-quished and many of their females cap-tured; for, in those old days (like those of more recent times, for that matter) the women was the prizes for which the men fought. Under circumstances like these the few women remaining in the van–quished tribe must have served as wives for all the men; in this manner polyandry had its inception. Polyandry gives woman certain privileges which monandry denies, and she is not slow to seize on these prerogatives and to use them in the furtherance of her own welfare. Poly-andry, originating from any cause what-ever, will always end in the establishment of a matriarchate in which the women are either directly or indirectl.ʎ at the head of the government. There are several matriarchates still extant in the world, and one of the best known is that of the Nairs, a people of India inhabiting that portion of the country lying between Cape Comorin and Mangalore, and the Ghats and the Indian Ocean. The Nairs are described as being the handsomest people in the world; the men being tall, sinewy, and extraordinary agile, while the women are slender and graceful with perfectly modeled figures. These people are, in fact, magnificent creatures physi-cally, but psychically and ethically they are far below our standards of excellence.

The Nair maiden is carefully chaper oned until she arrives at a marriageable age, say, fourteen or fifteen years, at which time some complaicant individual is selected who goes through the mar-riage ceremony with her. As soon as this mock-husband (for he is husband in name only) ties the *tali* or marriage cord about the neck of his bride, he is feasted and then dimissed; his wife must never again speak to or even look at him; he passes out of her life forever. Once safely wedded, the girl becomes emancipated, and can receive the attention of as many men as she may elect, though, I am in-formed, that it is not considered fashion-able, at present to have more than seven husbands, one for each day of the week. Of no importance, heretofore, after her farcical marriage, the Nair woman at once becomes a power in the council of the nation; as a matter of course, the higher her lovers the higher her rank becomes and the greater her influence- Here is female suffrage in its primitive form, brought about, it is true, by environment, and not by election franchie. As far as the children are concerned the power of the mother is absolute; for they know no father. Property, both personal and real, is vested in the woman; she is the mistress and the ruler.

I have demonstrated, I think, clearly and distinctly, that matriarchy or female government, is neither new nor advanced thought, but that it is as old, almost, as the human race; that the "New Woman" was born many thousands of years ago, and that her autotype, in some respects, is to be found today in a savage tribe of Mangalore. A return to matriarchy by civilized nations would be distinctly, and emphaticaly, and essentially retrograde

in every particular. The right to vote carries with it the right to hold office, and, if women are granted the privilege of suffrage, they must also be given the right to govern. Now let us see if we cannot find a reason for this atavistic desire, (matrarchy) in the physical and psychical histories of its advocates.

There are two kinds of genius; the first is progressive and always enunciates new and original matter of material benefit to the human race and which is, consequently, non-atavistic; the second is retrogressive and always enunciates dead and obsolete matter long since abandoned and thrown aside as being no longer use ful. The doctrines of communism and socialism, as I have shown in the first part of this lecture, are the products of degeneration and are clearly atavistic inasmuch as they are a reversion to the mental habitudes of our savage ancestors. The doctrines of the matriarchate are likewise degenerate beliefs, and if held by any civilized being of today are an evidence of psychic atavism. Atavism invariably attacks the weak; and individuals of a neurasthemic type are more frequently its victims than any other class of people. Hence, I think that I am perfectly safe in asserting that every woman who has been at all prominent in advancing the cause of equal rights in its entirety, has either given evidences of masculo-feminity (viraginity), or has shown, conclusively, that she was the victim of psycho-sexual aberrancy, or moral perversion. Not long since the newspapers were filled with the accounts of the sudden death of a brilliant young woman, whose atavistic genius made itself manifest not by the doctrine of free thought which she vigorously advocated, but by her openly expressed views on the subject of matrimony. She declared that, under the present laws, she would never marry, but that if she ever met a man whom she felt that she could love, she would unite herself to him without any ceremony whatever. She would render her children illegitimate in order that she might have absolute and sole control over them. You will remember what I said, in this respect, about the children of the Nairs. The histories of every viragint in the history of the world, show that they were either physically or psychically abnormal, or both. Joan of Arc was the victim of histero epilipsy, while Catherine the Great was a dipsomaniac and a creature of unbounded and inordinate seasuality. Messalina, the utterly wicked wife of Claudius, a woman of mascutine type whose very form embodied and shadowed forth the regnant idea of her mind—absolute and utter rulership—was a woman of such gross carnality that her lecherous conduct shocked even the depraved cuortiers of her lewd and salacious court. As Douglas Campbell has so cleverly pointed out in his "Puritan in Holland England and America," the side-lights of history declare that there is very good reason for believing that the Virgin Queen, Elizabeth of England, was not such as her admirers make her out to be. Sir Robert Cecil, a contemporaneous writer, says that "she was more man than woman," while history shows conclusively that she was a pronounced viragint with marked egomania. In a recent letter Mr. Geo. H. Yeaman, ex-Minister to Denmark, and a political economist of high merit, writes to me as follows: "Whether it be the relation of cause and effect, or only what logicians call a 'mere coincidence,' the fact remains that in Rome, Russia, France and England, political coruption, cruelty of government, sexual immorality —nay, downright, imprudent, open, boastful indecency—have culminated, for the most part, in the eras of the influence of viragints on government, or over governors." Viraginity has many phases. We see a mild form of it in the tom boy, who abandons her dolls and female companions for the marbles and masculine sports of her boy acquaintances. In the loud-talking, long-stepping, slang-using young woman we see another form, while the square-shouldered, stolid, cold, unemotional, unfeminine android (for she has the form of a woman without a woman's *psychas*) is yet another.

Many normal women of today, who are in favor of female suffrage, are influenced by a single idea; they have some great reform in view, such as the establishment of universal temperance, or the elevation of social morals. Suffrage in its entirity, that suffrage which will give them a share in the government, is not desired by them; they do not belong to the class of viragints, unsexed individuals, whose main object is the establishment of a matriarchate. I

emphasize the above for it will explain some seeming inconsistencies in my argument. Woman is a creature of the emotions, of impulses, of sentiment, and of feeling; in her the logical faculty is subordinate. She is influenced by the object immediately in view, and does not hesitate to form a judgement which is found on no other grounds save those of intuition. Logical men look beyond the immediate effects of an action and judge it by its ultimate effects. The percepts and recepts that form the concept of equal rights also embody a conclusion which, though, to a certain extent, conjectural, is yet capable of demonstration, and which declares that the final effect of female suffrage on posterity would be exceedingly harmful.

Now, man's psychical being is intimately connected with, and dependent on, his physical being, therefore it follows that degeneration of his physical organism will, necessirly, engender psychical degeneration also. Hence, if I can prove that woman, by leading a life in which her present environments are changed, produces physical degeneration, it will naturally follow that psychical degeneration will also accrue; and since one of the invariable results of degeneration is atavism, both physical and psychical, the phenomenon of a social revolution, in whichthe present form of government will be overthrown and matriarchy established in its stead, will be, not a possibility of the future, but a probability; that is, if measures are not taken to prevent it. That the leaders of this movement boldly declare that woman-government is their heart-felt desire, is a well established fact. Let me cite one instance. Not long ago, Susan B. Anthony said in my presence, as she stood beside the judge's chair in one of our court-houses and before seating herself in it, that there were those in her audiance who doubtless thought "that she was guilty of presumption and usurpation" in occupying the chair of a judge, but that "a day would surely come when they would no longer think so!"

Statistics show clearly and conclusively that there is an alarming increase of suicide and insanity, among the women of this country and I attribute this wholly to the already changed environment of our women. As the matter stands they have already too much liberty. The restraining influences, which formerly made woman peculiarly a house-wife, have been, in a measure, removed, and women mixes freely with the world. We see her entering into every walk and pursuit of life. What wonder then, that she is begining to falter beneath burdens entirely too great for her strength! Any new duty added to woman as a member of society would modify her environments to some extent and call for increased activity on her part. When a duty like suffrage is added, the change in her environment must, necessarily, be marked and radical, with great demands for increased activity; it would entail new and additional desires and emotions which would be most exhausting draughts on her nervous organism, But why carry this argument further? With lowered nervous vitality psychical degeneration sets in with loss of ethical purity. This is a fact beyond dispute. The inherited psychical habitudes of women handed down through hundreds and thousands of years would prevent the immediate destruction of that moral purity for which they are noted. I do not think that this ethical excellence would be lost in a day or a year or in hundreds of years for that matter; yet, there would come a time when the morality of today would be utterly lost and society would sink into some such state of existence as we now find *en evidence* among the Nairs. In support of this assertion I have only to instance the doctrines promulgated by some of the "most advanced" advocates of equal rights. The "free love" of the *advanced* woman, I take it, is but the free choice doctrine in vogue among the Nairs and other primitive people. It is folly to assert that the right of female suffrage will make no change in the environment of woman. The New Woman glories in the fact that the era which she hopes to inaugurate will introduce her into a new world! Not satisfied with the liberty she now enjoys, and which is proving to be exceedingly harmful to her in more ways than one, she longs for more freedom, a broader field of action. If nature provided women with inexhaustible supplies of nervous energy, they might set aside physical laws and burn the candle at both ends with impunity. The harmful effects resulting from female suffrage will not be seen tomorrow, or next week, or

week after next, or next month, or next year, or a hundred years hence, perhaps. The simple right to vote carries with it no immediate danger; the danger comes afterward; probably many years after the establishment of female suffrage, when woman, owing to her increased degeneration, gives free rein to her atavistic tendencies, and hurries ever backward toward the savage state of her barbarian ancestors, I see, in the establishment of equal rights, the first step toward that abyss of immoral horrors so repugnant to our ethical tastes—the matriarchate. Sunk as low as this, man will sink still lower—Ay! even to the communal *kachims* of Aleutian Islanders!

Some Methods in the Treatment of Nasal Troubles.

By J. C. Montgomery, M, D., Charlotte, N. C.

In no department has there been greater improvement, than in the treatment of Nose and Throat diseases. The evolution of modern methods has been slow and labored, but persistent and successful.

Diseases of the Nose and Throat are more numerous than at first thought we might imagine. There is a longer list of them, and a longer train of evil effects than is likely to be recognized by one who has not carefully considered this matter. Things we see the oftenest, impress us the least. We give more attention to the infrequent diseases than to those we are called often to treat. Common every day conditions lose their terror, however bad they may have seemed, or really were. These diseases are important because they are so numerous and so far reaching in their effects.

The opprobrium of our profession is in not curing common ailments, those little ills which, in the aggregate, cause greatest distress—not the rare, infrequent, obscure conditions. There are never two noses alike any more than there are two faces alike; it requires the exercise of good judgment and a moderate degree of skill often to determine pathological from physiological conditions.

Cultivated common sense is never out of place when called in consultation to a case of ordinary nasal catarrh. More frequent than any other disease, more widely distributed and more destructive to usefulness and happiness is the *so-called* disease known as catarrh. Too little attention has been given to the cause of this trouble. It may be safely said that within the past ten years many a septal spur and many a turbinated body has fallen a victim to the irritable temper of a dyspeptic and the injudicious specialism of the intra-nasal operation.

General nervous irritability, dyspepsia, gout, rheumatism and melancholia are all efficient causes of nasal symptoms, but it is much more common to see these remote causes combined with abnormal local conditions than it is to see them the sole cause. The practical point is that the ability and common sense of the rhinologist must be used in the differentiation of one cause from the other, assigning to each its proper significance and acting accordingly.

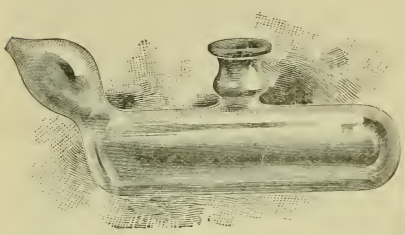
We are all familiar with the symptoms of a patient with nasal troubles, so the principal desire is to relieve the sufferer. Mild medicines used often will serve you far better than harsh and heroic treatment at longer intervals.

In the treatment of this trouble I have found very little satisfaction from constitutional remedies, other than to place the system in the best possible condition. By far the most satisfactory and reliable treatment will be found in local applications.

The antiseptic preparations now seeking eminence and favoritism at the hands of the profession are many. The preparation that has given me such uniform, excellent and lasting results is Glyco-Thymoline (Kress). It is a most excellent mixture, of a beautiful wine color, alkaline in reaction, slightly pungent and very pleasant to take. Its therapeutic virtues are best shown in nasal and pharyngeal troubles, though I am now using it with marked benefit in a case of chronic cystitis of ten month's standing. I had used the various remedies recommended, such as boric acid, sulphate of zinc, etc., with scarcely any improvement; but since I have been using Glyco Thymoline I see marked improvement in every way, particularly in less frequent urination, and with more ease, with also considerable improvement in general health.

The Bermingham Nasal Douche is es-

pecially recommended as the best means of administration. By this there is gained at the same time the effect of a nasal spray and a pharyngeal gargle. This instrument is about three inches long, made of glass, and has at its middle point on top a small funnel which is used in filling, and also acts as a valve controlling the amount of fluid flowing back through the nose and operates by the patient's finger while taking the Douche. The point is blunt and fits tightly into the nostril.



Case 1.—W. C. W. male, age 28 years, medium size, dark complexion, family history good, had a long protracted spell of Typhoid Fever two years ago. Eight months after recovery he states he began to have trouble with his left nostril, in the posterior nares there was a constant itching, with a dark and rather offensive discharge. Several months later the same trouble developed in the right nostril. The nasal passages became covered with thick crusts, breathing through the nose almost impossible. The left tonsil was enlarged and to some extent inflamed, his palate elongated and congested. There was an occasional slight hemorrhage from left nostril.

I put this patient on Glyco Thymoline daily, diluted. I used the preparation at my office first with large atomizer, giving the patient a Bermingham Nasal Douche to use himself frequently at home and at his place of business. The Glyco Thymoline relieved very quickly the constant itching sensation in the nares. I also give him one application of Glyco Thymoline to the throat daily. All the unpleasant symptoms are fast disappearing, there is scarcely any trouble in his breathing, crusts have almost ceased to form, no longer troubled with hemorrhage, general appearance much improved. The patient has now been under treatment five weeks. I confidently expect that within a few weeks he will be entirely relieved of his sore affliction.

Case II.—Miss J., school teacher, complained of inability to breathe through the nose, a constant dropping of mucous in her throat, and a tendency to easily catch "cold." These attacks came on so frequently as to seriously interfere with her teaching, and unless relief was obtained she would be compelled to give up her position. On examination, the terbinates, together with the pharyngeal and faucial tonsils were found to be enormously hypertrophied and covered with a thick tenaceous mucous that excited nausea and vomiting on attempts to clear the throat. A 20 per cent. solution of Glyco Thymoline was prescribed to be used in conjunction with the Bermingham Douche every four hours. Nasal breathing and general improvement soon fol lowed.

Case III.—Young man, 24 years of age, fine physique, family history good. The entire nose much thickened and enlarged, and the upper lip covered with superficial excoriations apparently caused by nasal discharge. A muco-purulent discharge into the pharynx has been prssent for some time. Constant pain in left frontal region. The real conditions are fissures in the nostril at the junction of the skin and mucous membrane, and ulceration on the nasal septum, occurring in a case of purulent rhinitis. Through these abrasions in the skin and mucous membrane, sepsis occurs, and the result we have a cellular inflammation which is marked in this case. It is impossible for me to wash out the nostrils without the use of cocaine, consequently I have been using a two per cent. spray solution, following this with a weak solution of Peroxide of Hydrogen. I then dry the nostrils with absorbent cotton, and apply a 30 grain solution of nitrate of silver to all the ulcerations and fissures. After the silver application, I then fill the nostrils with Glyco Thymoline. I perform this treatment every day, and expect a permanent cure within a week.

In conclusion, let me say that Glyco Thymoline is a preparation in which we can place strict reliance. By its continued use you will get excellent results in the treatment of mucous membrane affections.

Hernia of a Sarcomatous Ovary.*

By Geo. Seymour, M. D., Utica, N. Y.

On the fifteenth day of November last I was requested to visit Mrs. D——, at her residence, to advise in reference to a swelling or tumor in the right inguinal region.

She was forty-eight years old, mother of seven children, the oldest twenty-five, the youngest five years of age.

She gave no history of miscarriage or menstrual derangement of any kind, and said that a small tumor had first appeared in the right groin about two years ago, had increased in size, without causing pain or discomfort; disappearing when she was in the recumbent position throughout the first year of its existence, but remaining prominent both day and night during the past year

Examination showed the tumor to be somewhat sensitive to touch or pressure, with slight heat and redness of surface, hard and irreducible.

For two weeks previous it had caused some pain when she was sitting, standing or moving about. There was no vomiting or obstruction to movements of the bowel.

The appearance and location of the tumor led me to think it to be an inguinal hernia, possibly of incarcerated omentum, without strangulation.

Dr. A. R. Simmons, who saw the case with me a few hours after my first visit, concurred with me in the opinion that an operation for its reduction and the patient's relief was advisable.

She accordingly went to St. Luke's Hospital, and on November 20th, in the presence of Dr. W. E. Ford, Medical Director, and Dr. A. J. Browne, a member of St. Luke's staff, we performed an operation, the commencement of which was with the idea of dealing with an ordinary inguinal hernia, incarcerated but not accompanied with intestinal obstruction.

After incision of the integument and tissues along the tract of the tumor down to its sack, which was composed of layers of facia and peritoneum, it was found to be attached to a large pedicle about four inches long and three-fourth of an inch in diameter, extending from the body of the uterus within the pelvic cavity out through the internal ring to the under side and upper end of the tumor as it lay in the inguinal canal.

The pedicle was tied with a strong silk ligature, cut off at about the junction of its outer and middle thirds, and the severed end of the portion left sutured with cat gut into and at the opening of the internal abdominal ring.

A portion of the sack was ligated with cat gut and excised. The tumor was ovoid in shape, four inchee in length, eight inches in circumference, and weighed five and three-fourths ounces.

The wound was closed with silk worm gut sutures, except at its lower part, and iodoform gauze left in the whole tract for drainage.

At the end of six weeks from the time of the operation the large ligature of the pedicle had passed out of the sinus, and the wound completely closed.

Microscopical examination of the tumor by Dr. Stenup, the pathologist of the hospital, proved it to be a spindle-cell sarcoma of the ovary.

The woman is now in apparent good health, having neither direct nor indirect disturbance or inconvenience of the pelvic organ or functions. Menstruation has occurred twice, in apparent normal manner, since the operation.

I find no mention of hernia of a sarcomatous ovary in any literature or record at my disposal. Sarcoma of the ovaries at their normal locations within the pelvis is comparatively rare. Cysto-sarcoma is oftener mentioned than either round-cell sarcoma, fibro-sarcoma, or spindle-cell sarcoma, so that *a spindle-cell sarcomatous ovary, escaping when small of size through the internal ring as a hernia, developing outside the pelvic cavity proper and having direct attachment to the uterus by means of a pedicle, may be regarded as exceedingly uncommon.*

Peaslee, in his work on Ovarian Tumors, says: "Carcinoma of the ovary is very rare," that ',medullary cancer of the ovary is more rare than schirrhus," and that a "single ovary is more often affected by schirrus than both."

Rindfleisch in his Text Book of Pathological Histology, says: "The small-celled, spindle-celled, sarcoma has the

*Read before the N. Y. State Medical Society at its Annual Meetiug, January 28th, 1897.

same seats as the fibromas: it is also often enough found beside (for example in the uterus) fibromas."

Scanzoni says: "Solid cancerous tumors are rarely met with in the ovaries, except as a secondary affection," and that he has sometimes observed fibrous cancer of the ovary as a primary affection.

Lawson Tait, in his extensive operative experience, as recounted in his work published in 1882, simply speaks of "one fibromatous tumor which was clearly malignant," but seems not to have encountered a sarcomatous ovarian hernia.

T. Gillaird Thomas, in the fifth edition of his work on Diseases of Women, devotes a paragraph to cysto-sarcoma, and quotes Rindfleisch as to the varieties of sarcoma.

T. A. Emmet, in his Principles and Practice of Gynecology, published in 1879, says: "Instances of scirrhus and sarcoma have been met with, of great interest to the pathologist no doubt, but of little practical import, since, however, great the necessity, we lack the means to differentiate during life between the several forms of malignant disease. I have never met with an instance of any form of malignant disease which was confined to the ovary. In fact when the ovaries are involved, it is, as it were, the last stage of some contiguous disease in which the rest of the pelvic tissues will have already become involved."

Grailey Hewitt, in his work on Diseases of Women, published in 1887, says: "True cancerous disease of the ovary of large size is rare unaccompanied by similar disease of adjacent parts; and it is also rare to find carcinomatous disease of the ovary uncomplicated with cystic disease of the same organ."

Dr. Washington Atlee describes four interesting cases of sarcoma of the ovary.

Garrigues says in his recent work: "Sarcoma of the ovary is a rare affection," and that "spindle-celled sarcoma is the most common variety."

Pozzi says; "This neoplasm is of rare occurrence; according to Schroder's ovariotomies Cohn estimates the frequency as about one per cent. in relation to cysts. It is usually bilateral. The spindle-celled, or fibro-plastic, is more frequent than the round-celled or embryoplastic."

Dr. Cragin, at a meeting of the New York Obstetrical Society, January 3d, 1893, reported a spindle-cell sarcoma of the ovary removed by cœliotomy.

At a meeting of the society, January 2d, 1894, Dr. H. C. Coe reported "a case of fibro-sarcoma of the ovary with operation and recovery."

In the American Gynecological and Obstetrical Journal of March, 1895, under the head of "The Status of Gynecology Abroad," by Hiram N. Vineburg, M. D., Dr. L. Pick, on the "Symptomatology and Prognosis of Sarcoma of the Ovaries," sums up as follows:

"The prognosis of ovarian sarcoma of whatever variety, is more grave when the disease is bilateral."

"Round cell sarcoma occurs preponderately in both ovaries, that is in a malignant form."

"When it occurs unlaterally it may be very benign; certainly not more malignant than the unilateral spindle-cell sarcoma."

"Ovarian sarcomatous growths in young persons show a strong tendency to be of the round cell variety."

"Round cell sarcoma of the ovary has a strong disposition to occur in young individuals."

The salient features of this case are:

1st. Its existence as an inguinal hernia.

2d. Its pathological character—spindle cell sarcoma.

3d. Being a primary neoplasm rather than following cancer or any apparent disease of any other part.

4th. No local or general manifestation of deranged health of the patient.

Electricity in Practice.

By F. C. Peirsol, M. D., Haywards, Cal.

Electricity, in a case of obstruction of the bowel, where the obstruction arose from pressure of an abdominal tumor on the anterior wall of the rectum, has, in my hands, given excellent results, and while the case is not common, yet I feel that it is an interesting one and will bear description.

The patient, a woman, sixty-five years of age, has for twenty-two years carried a tumor of no mean size. Twenty years ago it was found necessary to tap it, and this was done through the rectum. For

five months she lay at the point of death, but finally recovered, and for a period of eighteen years enjoyed comparative comfort.

One year ago she consulted me in regard to her kidneys, which she said had been giving her trouble for almost three months.

On examination I found much albumen in the urine. This I attributed to the then growing tumor, or, more properly, to the intra-abdominal pressure caused by the tumor.

The patient informed me that she was going to take a short trip, and that on her return she would place herself under my care. I advised her not to attempt the trip, but she persisted, and, when next called, it was to find her suffering with exeruciating pain.

This I attempted to relieve by the use of morphine, but the drug only made matters worse, and avena sativa was administered to overcome its effects.

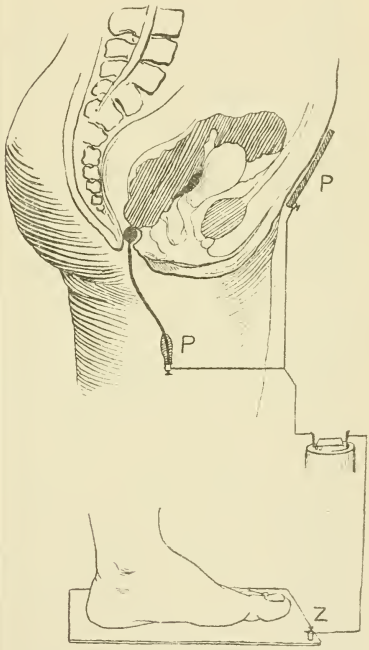
Consultation was called, and it was decided that she had but a few hours to live. So, for the time being, our efforts were merely to relieve pain. After trying all the ordinary methods a battery was sent for and a mild faradic current was passed through the abdomen. This gave her such ease that she slept for some hours. On awakening she was able to talk, and informed me that her bowels had not operated for almost a week, also that she had been unable to retain any thing on the stomach, the least irritation causing vomiting, in which coagulated blood was frequently discharged.

Examining the stomach I found a large firm bunch in cardiac end and directly below it a spot about the size of a quarter which was very tender on pressure. I leave this to tell its own story, and will not touch on its treatment, but will pass to the examination of the rectum.

Pressing on the anterior wall, could be felt and seen a bunch about the size of a goose egg, reducing the lumen of the bowel to about three-eights of an inch. The posterior portion had become inflamed and ulcerated. This, most likely was caused by the pressure of the tumor. Passing a catheter beyond the tumor I injected about a pint of a strong infusion of peach bark, thus allaying the irritation and obtaining a movement of the bowels.

The patient was now so much relieved that I began to have hopes of prolonging her life and cast about me for the best method of reducing the tumor. As electricity had given such relief at the outset, it was but natural that I should again turn to it.

By means of a bifurcated conducting cord a positive frradic current was applied to that portion of the tumor which lay against the rectum, and also to the anterior wall of the abdomen, while the negative pole of the battery was placed at the patient's feet. The application in the rectum was made with a modification of "Dr. Hancock's electrode for the upper rectum," while that to the abdomen and to the feet was made by means of zinc plates.



There has been a slow but steady improvement, and today the woman, while far from well, is again enjoying life, the tumor being much reduced in size, not as inflamed and not interfering with the kidneys.

The only disagreeable feature of the treatment being a trembling sensation in

the abdomen, an occasional palpitation of the heart, and an intense prurutis vulva, though the latter may not have been the result of the electricity.

Digestive Ferments: A Comparison of the Old and New.

By Archer Atkinson. M. D., Special work Diseases of the Stomach and Bowels: late Prof. of Materia Medica: Member of the Baltimore Microscopic Society; Member of the Victoria Institution. London: Member of the Society of Science. Literature and Art, London, etc., etc.

Pharmacy and Therapeutics are ever on the move to advance the purity and comeliness of drugs, and to alleviate suffering, and of late years we find new remedies especially suited to speedy relief of man's many infirmities and it is well that the Stomach, which is the avant-courier to all the rest of the body, should have been the particular organ to which recent experiments have been directed. Particular attention has of late been given to the action of reagents on articles intended for food, as shown in the elimination from many kinds of aliment, of the cruder portions, the chaff so to speak, which served to increase the bulk and to add to the difficulties of digestion. Thus all fats are hard to digest, disgusting the appetite and causing the individual to refuse food so essential for his growth and strength. Children are prone to pick out the fatty portions from their food, leaving the body weak and almost marasmic—so too with starchy foods, which offend the stomach and produce *flatulence with colic and diarrhœa*. It is during this period of debility when disease lurks in the vicinity, that enfeebling germs and poisoning ferments put in their work, when the system is at its lowest ebb and least able to resist the inroads of diseases. The stomach refuses or is unable to meet the tax of digesting fats or of converting starchy materials into sugar and other hydro-carbons, and the strength and temperature flag.

This matter is of great interest to the Medical Profession, and of late we are having presented to our notice many helps to the digestion of fatty and starchy foods with far less tax to the powers of the stomach and intestines than formerly. We find that within a few years digestive ferments have achieved a triumph, which is wonderful. That a pepsin, which a few years ago could digest but a limited amount of albumen has now increased so in purity and in concentration as to be more than a thousand-times its original strength. Science has done all this. Clinical experimentation would have required a longer time, and now we have diastatic digestive ferments, which outstrip the old pepsin by many degrees. Before these aids to digestion were discovered, it was all many could do to take one square meal a day, knowing the difficulty they would encounter in its digestion.

Starch is especially difficult to complete digestion, (the gastric juice possessing little power over it,) requiring some agent like ptyalin or diastase, as found in malt, for this purpose. In simple malt we find a certain amount of diastase, but in fermented malt preparations this is destroyed by the acids present.

Up to a very recent date it has been impossible to obtain upon the open market a diastase in dry form which was calculated to answer the purposes at issue. The fault was traceable either to admixture, adulteration, improper separation, or destruction of the digestive properties of the diastase in the process of manufacture through possibly the employment of heat. It is only upon the introduction of Taka-diastase that I have been able to obtain a digestive agent for starch which is satisfactory for my purposes.

In converting the starch of our food into a soluble condition by the action of diastase from any source, the starch molecules have to undergo a new arrangement by *first* being changed into erythrodextrose and maltose. Thus we have (C_{12}-H_{20}-O_{10}) 9 and (C_{12}-H_{22}-O_{11}). Still further hydration of the erythrodextrose takes place by the continued action of diastase.

Chemistry has lately placed within our reach agents which so modify the grosser elements of food that by their help the most delicate can retain and digest *perfectly* articles of food, which before had always disagreed with them and *now* they

can enjoy God's best gift, i. e., a good appetite and a perfect digestion.

Anorexa is one of the most frequent troubles with elderly people. Unfortunately many Dyspeptics have an idea that they cannot be relieved. Having tried a few drugs they settle down into a despondency, either refusing to eat because they suffer after it or worse still, eating whatever they find before them, until they have become too far advanced to be benefitted by any course of treatment. If they would have resourse to preventive therapy and then anticipate the ill to which they know themselves liable, they would act the wiser part—correct the *digestion* and all goes merry as a marriage bell.

In dyspeptics a frequent form of trouble is the starchy or amylaceous variety, and whatever is capable of correcting this condition is next to avoiding starch-containing foods, and there are many articles of food into which starch enters which are not bread, but if we *must* eat starch, no matter in which form it presents itself, it is desirable to have some agent which is capable of converting that starch into an *innocent* product, and such a diastatic ferment has been discovered at last. In Amylaceous Dyspepsia. (indigestion)—Pepsin does not work as was once supposed, being now known to digest only the albumen in the food. This is a salivary indigestion, and not a gastric one. Prolonged chewing of the food, however, does help very considerably so as to mix it well with the saliva that it may be the better acted on when it reaches the stomach. Leuchs discovered a century ago that Saliva had the power of changing starch into sugar, and this the gastric juice cannot do. The longer the starchy food is retained in the mouth in the process of chewing the better the Saliva acts upon it, for though this salivary fluid is at first alkaline, it by degrees loses its alkalinity and is completely neutralized after it shall have passed into the intestines.

We thus find the starch in the mouth changed partially into dextrine, setting free the nitroginized elements that they may receive the digestive action of the gastric juice when swallowed. It is thought too that the very presence of the Saliva in the stomach with the well masticated food, stimulates the secretive activity of that viscus, causing it to give off an abundant supply of strong gastric juice.

Dr. Carpenter says:—"The Saliva prepares food for the business of the stomach, and if the ordinary operations of mastication and insalivation be neglected, the stomach has to do the whole work of preparation, as well as its own especial duty of digestion." This we find well illustrated in the case of serpents whose abundent Saliva must be a powerful agent in digestion, as they have no power to masticate and nearly all their food is converted into nutriment in the stomach of the animal.

Too much acidity in the food, as vinegar and pickles, serve to retard the action of the Salivary fluid, as will too much indulgence in candy and sugar in any form.

Thus as starch forms half of most farinaceous foods and all that starch has to be converted into sugar, it is needless to say that an extra indulgence in sugar food is conducive to salivary indigestion, as shown in acid stomach, belching, heart burn, headache, intestinal colic and wind, ending in Dyspepsia and intestinal catarrh, which last is so tenacious and rebellious.

The Profession found in Malt a diastatic ferment, but the process was slow and incomplete, indeed in many malts there is no diastase.

Certain farinaceous matters may be rendered more susceptible to the action of simple Saliva by toasting, as seen in the easy digestion of the Swieback so much used in sickness by the Germans, and in baked flour, as suggested by Fothergill.

In Salivary Dyspepsia, which is as common as the gastric variety, diastase is the real digestive helper, and this we find in a new remedial agent, discovered by a Japanese Chemist, Jokichi-Takamine which in honor of him has received the name in Pharmacy of "Taka-Diastase."

This discovery is a most important link in the series of digestive remedies. Sir Wm. Roberts has shown the importance of starch as an article in man's food and said that two-thirds of our food consists of it.

Amylaceous Dyspepsia has long been the opprobrium of the profession, the bête noire, the disease which we could not reach. If we used alkalies we rendered the saliva too alkaline; if we prescribed acids we neutralized the natural

existing alkali so necessary in that fluid. In our ignorance of the modus operandi we are glad of any remedy in such cases, and an agent possessing the power to convert *one hundred* times its *own weight* of starch into sugar, should merit our highest enconiums. It does not always happen that digestion occurs in the test tube exactly as it is thought to do in the human stomach, but there are many things to be gathered in the study of digestive ferments from theories in the lecture room, in tubes in the laboratory, as in the study of digestive processes through wounds in the stomach, as in the St. Martin experiments.

After years of experimentation in the living stomach, we can now assert safely that we can use the digestive ferments with the certainty of obtaining their full results.

Taka Diastase has no burnt-meat taste like Pepsin, but it has a nice nutty flavor; has no smell, and may be given indefinitely without *any bad effects*. It is a soluble ferment, and free from any impurity to lessen its efficacy, or to increase its bulk, while unlike Pepsin, its action is not destroyed by drugs.

Like yeast, it is prepared from meal, or wheat bran, by the action of the vegetable fungus, and from the fungus cultivated for the purpose this fermented extract is produced, and from this results the Taka-Diastase. This ferment is es pecially applicable to the starchy form of indigestion, which we recognize as Intestinal, the same form in which the diastatic ferment of the glands of the intestines is called into play. The action of Taka-Diastase is instantaneous and certain. Temperature and purity of ingredients form the necessary *Sine qua non* for success in their preparations. Too low temperature falls short of our perfect ferment, while too elevated a heat ruins the whole product, and this is the reason why the Taka-Diastase is so perfect in its action in changing starch into Maltose and Dextrose.

This vegetable ferment has proven to be the best diastatic promoter in the change of starch into sugar, and is different from the digestive ferments long known and intended chiefly to convert *proteid matters* into the pabulum from which muscular (meat) tissue should be elaborated. In preparing this starchy ferment, Taka-Diastase, a yeast leaven is used, which permeates and leavens up the entire mass with which it is mixed, so multiplying the meal in the cruse that it never gives out, and so increasing the five loaves as to feed the entire multitude, going on thus in geometrical progression, repeating its work each day and yet retaining all its diastatic power. Thus we have a digestive ferment capable of converting any amount of starchy matter into a sugary, soluble mass, capable of absorption at once.

In the drug store this starchy ferment may be kept indefinitely and it is in the *moist* state that we find the beginning of conversion of the starch granules into sugar.

In changing the food of infants, that is in weaning them, or in adding other foods, on which they are to live chiefly for the next two or three years, we find starchy matters in the form of arrow-root, malted milk, crackers, pap, lightbread, and whatever farinaceous food may suit the mother's notion of nourishment for her babe. Just so in food of old people, who consume much starch and who are liable to starchy indigestion.

Here then we find the beginning of sour stomach, of acid belch, flatulence, cramps, colics and diarrhœa, ending in inanition, which Chossat said: "is the cause of death, which marches silently *in front* with every disease in which alimentation falls below the normal standard."

The old ferments Pepsin and Pancreatin, the one for albuminoids, and the other for digestion of fats, all fail here, but with a true starchy diastatic ferment we have just the *preventive* and remedy at hand and pancreatine can act only in an Alkaline Medium.

Most of the prepared foods on the market are not suitable pabula for babies —chiefly consisting of starchy matter, as baked flour with dried milk to give albuminous supply to it, and in this way do we find infantile indigestion run into imperfect assimilation and nutrition *in youth*, and into confirmed dyspepsia in adults. This view of the action, *preventive*, or digestive ferments has not been as closely looked after as it is hoped it will be in the future, for surely prevention is more than sixteen-times better than drugs after the trouble shall have

begun. While digestive ferments may be injured at a high temperature, cold does not alter them. They may be lowered to 32° without injuring and thus rendered for *the time* inactive, but they have their diastatic property entirely destroyed at 160° F., while at about 130° F., they are at their best.

The digestion of starchy materials, as bread, fruits and vegetables, must be considered a part from the digestion of albuminous materials, as eggs, milk and the flesh of animals, and a different ferment is required to digest each of these varieties of food.

The modern application of digestive ferments to the pre digestion of food of any kind is an achievement in physiological science worthy our study. This partially we have known in regard to the action of Pepsin for many years, but the tendency to starchy fermentation with its attendent in conveniences, within the stomach and bowels, has ever been a source of anxiety to physicians, and if we can by proxy, so to speak, accomplish such change from starch into sugar we save the stomach much labor and distress. We thus do for the digestive apparatus by a vegetable ferment, what it would require much time to effect in the common course of digestion. Digestive ferments are sui generis; they are neither drug nor chemical, but are animal and vegetable, and it is chiefly by their fruits that we know them. Until lately no digestive ferment has been entirely freed from its surroundings. In pepsin we have an animal ferment, but, so far, it is mixed with mucin and other organic matters, and perhaps only in one of the vegetable variety have we any pure digestive ferment, which is altogether free to act of itself.

We have many articles of food, which on fermentation yield products, which retard the process of digestion. Thus:

Milk	yields by ferment			Lactic Acid.
Butter	"	"	"	Butturic Acid.
Goat Fat	"	"	"	Caprie Acid.
Mucus	"	"	"	Mucic Acid.
Grapes	"	"	"	Wine and Acid.
Fruits	"	"	"	Brandy.
Grains	"	"	"	Whiskies.
Sugar cane	"	"	"	Rum.
Juniper berries	"	"	"	Gin.

The word "Fermentum" signifies yeast, meaning the Levure-de-biere, levain or leaven, in English. It consists of three fungoid vegetables—viz:—1st., the Torula Cerevisiæ or the Mycodema Cervisiæ; 2nd., of the Tacchoromyces vini et Cerevisiæ, and of the Cryptococcus fermentum. We find the yeast ferment in the fluid and in the dry cake form both.

Compared with the old malts, this Taka-Diastase will convert one hundred times its own weight of dry starch into sugar, while the strongest malt will effect only one-twentieth that amount. It is a permanent, fixed ferment: it is concentrated and requires but a few grains of the dry powder, while most malts require a tablespoonful for each dose. It is *free* from sugar, while all malts contain a large amount of that material. It is miscible with other drugs, being perfectly soluble, and owing to the very much smaller dose than of malt, it is less expensive, besides being more palatable. It possesses diastatic properties beyond any agent yet discovered. A happy effect of this Taka-Diastase is that it relieves constipation so common in most forms of Dyspepsia, and in elderly persons this condition is so apt to exist with atonic distension of the bowel with flatulence as to give rise to much distress. In the present form in which we get our flour from wheat, so as to render it very white and light, it consists largely of starch, while the cheaper, but more nourishing brands of flour, retain all the gluten and phosphates, which are discarded in the higher priced brands. Thus we daily see the greater need of some good diastatic aid to our digestion, the more starch we eat the greater is the need of the perfect starch digestion. The plainer classes get the most nutritious flour, and it is well they do. Various cereals yield different percentages of starchy products; thus rice contains 86 per cent. against 32 per cent. in wheat, 32 in rye, 74 in oats, 82 in corn and 23 in potatoes, thus our vegetable food consists largely of starch. We have, of course, the proteid form of food, as well as these carbo-hydrates and the fats, all necessary in the nutrition of animals. We find Pepsin useful in digesting the protoids and the bile and pancreatic fluids useful in digesting the oily materials of the food, but much of the starch passes into the intestines as pure starch, a candidate for intestinal fermentation, distress and of inflammation

of the bowels. In Typhoid (Enteric) Fever, if bread is given to any extent we find this condition to obtain.

Nature has furnished emulsifiers in the saliva of the mouth glands and of the pancreas, but for various reasons, often the excessive waste of salivary fluid in tobacco chewers, there is a defective amount of this fluid, and what a boon have we in any agent which will at once and with no tax on the stomach effect the conversion of starchy foods into sugar and alcohol, and thus render digestion easy and perfect!

Dyspepsia is a common forerunner of consumption, and we are not to wonder that poor nourishment in indigestion should cause loss of flesh and strength, that langor, neuralgic suffering, flatulence and marasmus should follow in the wake of approaching starvation, that the fats little by little disappear, that the muscles shrink, the skin wrinkles, the blood corpucles become fewer, shrivelled up, and even according to Dr. Von de Stricht, the marrow in the bones shrinks away, and the circulation collapses into a condition of pernicious anæmia, and Cutter says that in the attenuated condition of the blood the red dises become fewer and fewer and soon lose their plumpness from loss of their contents.

In affections of the digestive organs so common in summer the advantage of a quick digestive ferment shows itself. In such cases it is well that the cow's milk should be sterilized for safety. The treatment of summer troubles in infants is chiefly dietary and the importance of having on hand *just* the digestive ferment, which is at once effective, yielding always the same result, is readily appreciated. Many young children do not thrive and yet we cannot find the cause. They are not absolutely ill, but they resist indigestion badly and become nervous.

They are simply weakly children, losing weight, feeding and sleeping badly. In such cases we find the milk fails to nourish them, and that too much starch is left in the food to change by the fermentive action of the stomach and bowels and thus gives trouble. In all acute diseases the desideratum is to keep the patient supported, nourished, until the trouble shall have run its course, often making the use of drugs a secondary consideration. This is especially true in Enteric (Typhoid) fever, whereby the addition of a little diastatic ferment we secure a food, which will be always acceptable to the stomach, of easy digestion, and which will be converted into good blood and flesh in the soonest possible time, and with least distress to the patient.

Most invalids recovering from acute diseases will find in the Taka Diastase an easy digester, and will realize that the feeling of exhaustion quickly passes away, so that with returning health there will be a hearty desire for food. No agent, not belonging really to the class of Narcotics, so favors sleep as the Taka-Diastase ferment, from the readiness with which it relieves the flatulence of indigestion, and thus soothes to sleep like a lullaby.

As a comfort to the poor nursing mother none knows as well as herself, and her physician, what a drain a hearty infant is to her, how the strength of the fond mother goes out to the infant at her breast. She knows too what a help in these cases is the new ferment in *completing* the digestion of the mother's food, so that she may afford *full* nourishment to her babe, and get *also her* full quota of sleep. Many nursing mothers are apt to become enfeebled, and thus afford but little and poor milk, and it is all important to settle on some plan by which the strength of the mother may be restored so as to withstand the drain and to furnish an increased supply and an improved quality of milk for the little one, and here we want an article which will furnish the most *nutritive* and *tonic* supply possible, and capable of converting starch and sugar quickly, so as to be taken at once into the circulation and supply the needed elements of heat and growth. All nutrition is derived from the food we eat and the process of digestion should be kept as *perfect* as may be, but this food must go to form *good blood first* of all, so that the organs may derive their powers from the blood supply which too often is inadequate for the accomplishment of *full* digestion unless all parts of the food are digested, fat, starch, albumen and all. In many stomachs starch is the bug-bear to digestion, and yet is an essential portion of our food. With a perfect starch digester the dreaded days of starchy dyspepsia, or of amylaceous indigestion, will, indeed, be few. It affords repose to the organ, while it is

really performing the stomach's work of changing this indigestible starchy food into sugar, and leaving the fatty and proteid portions of the food to be cared for by its appropriate digester.

Prof. W. S. Christopher, in the College of Physicians and Surgeons, Professor of Diseases of Children, refers to the action of Taka-Diastase in fermentive indigestion of children:

"I have found, when the abnormal fermentations are limited to the small intestine, a very effective means is to digest the starch in the stomach, from which organ the resulting sugar is *directly* absorbed and *does not*, therefore, reach the seat of the trouble in the small intestine to provoke and maintain unpleasant symptoms. At times very considerable quantities of starch can be thus digested in the stomach. At other times the process is not very successful, but in general a sufficient quantity of the carbohydrate can be thus digested in the stomach and prevented from *ever* reaching the small intestine, to meet all the needs of the patient, while starving the micro-organisms in the small intestine. For the purpose of thus digesting starches in the stomach, it is my custom to administer an active diastatic ferment immediately after meals and before the secretion of hydrochloric acid has reached such a degree as to interfere with the diastatic action. According to Chittendon and Griswold, the presence of 0.005 per cent. of hydrochloric acid increases the diastatic action of saliva, while a stronger acid diminishes it, 0.1 to 0.4 per cent. being sufficient to completely stop the action of the saliva.

"Lately the diastase which I have employed for this purpose is Taka-Diastase, in doses of three to five grains of the powder, which has proven more satisfac tory in my hands than any other amylolytic ferment which I have ever employed."

The amylaceous matters of our food pass through the wall of the alimentary canal direct into the portal vein as soluble grape sugar. Dr. Dechambre saw that sugar constantly occurs in the urine of elderly persons, and that in 19 out of 20 aged women at the Hospital de Salpetriere in Paris the urine was saccharine. This condition then calls urgently for some agent capable of relieving it, which, in old diabetic patients is nearly always attended by emaciation. The on origo of most diseases lies originally in the stomach—or the granary—so to speak, in which is made up the strength and energy of the entire system. Nature points to the necessity of food of the right kind, and, as the Scotch say, "Life's work needs life's food," and a plenty of it. Keep the stomach in order and the wheels of the human machinery go gliding on. Feed the hard working man and you have little of neurotic complaints, or of dyspeptic, or of liver symptoms. Keep the blood vessels supplied with the material for supplying good fresh blood and warmth, and you have vigor of nerve and muscle assured. When the imperfection of digestion obtains, when loss of appetite, loss of weight becomes apparent, sick headache with sour belch and flatulence set in with furred tongue, listlessness, mental inertia or depression, we have then signs which show derangement of the digestive organs, the patient weakens, becomes nervous, irritable and despondent. When all these signs prevail we know there is dyspepsia with some thing undiscovered beyond, to keep up the trouble. Gout, rheumatism, albuminous retention or ammoniacal poison, are likely at the bottom of the difficulty, all chiefly from defective digestive powers; clear the blood of its uric and lithic acids; free the system of its retained albumen, flush out the kidneys and wash out the bladder to remove decomposing urine and we will be astonished how the horizon will brighten for the patient. Above all, improve the condition of the stomach—see that the digestion is perfect—and you may leave the rest to nature.

If digestion has been feeble or impaired, restore it by *non irritating tonic* remedies, which arrest fermentation and allay irritation of its mucous coat. This is especially true during the prevalence of summer troubles in children, among whom we have our chief practice—check the vomiting and too frequent stools, and we restore the alimentary glands to the normal condition.

The subject of digestive ferments has been less studied than perhaps any other process connected with alimentation. The term digestion explains itself, but the word "ferment" may have several meanings, such as the conversion of sugar into alcohol, in the fermentations of cider into

brandies, of grape juice into brandy, of grain into whiskey, and of sugar cane into rum, which last would better illustrate our meaning. Moisture and a certain degree of warmth are essential to fermentation; if too much warmth, the process goes on too rapidly; if too much moisture be present, the result is too weak.

In fermenting fruit pumice the first product, is cider, and is called vinous fermentation. We have many vegetable substances, which yield fermentation—thus the yeast yields the well known ferment, with which we leaven our bread, the life everlasting, or the so-called cat-weed, or Gnaphalium, and the Irish potato. The Indians used to prepare their "Chica" from the juice of the Indian corn, just as the natives of Coromondel make their "Calore" from the sap of the cocoanut. Indeed, the juice or sap of any herb or tree, which is saccharine will yield a fermented spirituous liquor. The products yielded in the manufacture of the famous Russian "Quass" consists of malt and form a fattening food for animals. A simple illustration of first the vinous and afterwards of the acetous fermentation is in the stale sap of the Ironwood or Ostya Virginica.

Milne Edwards conjectured that the phenomena of Lactic and Butteric Acids might depend on the action of infusoria or microbes, which thrive well in the intestinal tube and which give rise to distension from carbonic acid gas, and hydrogen. Leared showed in his study of the causes of heart-burn, that it was mainly produced by lactic fermentation.

All digestive secretions possess great power of warding off putrefaction; else meats in the stomach at 98 degrees would be even more subject to putrefy than dead bodies on the battle field; but the ingredients of the digestive fluid step in to cure the meat, so to speak, from decomposition, so that it may serve to nourish the body and *not* be changed into *ptomaines* with which to poison it.

The old maxim was to take but little fluid at meals, that the normal secretions are large enough to dissolve many of the contents of the stomach, but they are speedily *re-absorbed*, or pass down with the chyme, and thus do not dilute the gastric juice, but rather help to rinse out the organ and to dissolve the solid ingesta and have more time to act upon them *after* they shall have passed down from the stomach proper. When fermentation of gases becomes too abundant we regard the condition as Starchy Indigestion, or, Intestinal Indigestion, which tends to become chronic, attended with distention, pain, palpitation, pressure about the region of the heart, as if the heart was being *puffed out*; and this fermentation occurs below the stomach since the microbes, producing it, always thrive best in the intestinal alkaline fluids.

In treating Typhoid Fever and Bright's Disease, where fluid food is the main reliance, it is difficult to prevent the accumulation of gas.

A few cases may illustrate the action of Taka-Diastase, not alone in Dyspepsia, but in conditions where starchy indigestion has retarded the relief, which might have been afforded by remedies, but for its co-existence:

Case No. 1.—Mrs. E——, aet 36, phthisical, has abscess (cavity) under right clavicle, cough at night severe, expectoration copious and purulent, has reduced much within past two years; has uneasiness after meals with much distension. She was kept for two weeks on Taka-Diastase after bismuth, pepsin and nux vomica had failed, with much improvement; she has now a better appetite, is free from costiveness and is gaining flesh in spite of continuous purulent expectoration. Her constipation is much improved.

Case No. 2.—An elderly gentleman has had distention from gas, amounting to severe pain, and suffers from alternate constipation and diarrhœa, with constant dread of passing flatus in company. He took a couple of dozen of capsules of Taka-Diastase with much relief.

Case No. 3.—Mr. ——, aet 25, has poor digestion, distressing flatulence; put him on Taka-Diastase capsules with much improvement.

Case No. 4.—A lady with distressing flatulence often attended with diarrhœa; sub-gallate bismuth for a time afforded some relief to the diarrhœa but the flatus continued. She was put on capsules of Taka-Diastase in five grain doses with relief to flatulence and diarrhœa.

Case No. 5.—A Presbyterian minister of this city thus writes: "I am happy to be able to report considerable improvement in my condition since I saw you

last. As I have done little else than take Taka-Diastase, I attribute my more comfortable feeling to this prescription. Accept my thanks for your many kindnesses and my sincere wish that you may recieve even more good and comfort for you and yours than you have afforded to others through your professional skill and generosity."

Acetone in Eclampsia.

Drs. J. A. Clark and L. L. Skelton, of Chicago, have just published an article on some of the causes of eclampsia. The cause of eclampsia has not been satisfactorily given. Among those most commonly accepted are renal insufficiency and albuminuria, but it has been ascribed to acute epilepsy, pressure on ureters and blood vessels, dilatation of ureters, cerebral anæmia and hyperemia, auto-infection and a special microbe.

The review of literature on the subject shows that the causes are not well defined, but the weight of opinion ascribes to some blood poison the etiological factor. The kidneys have been given more attention than they deserve, because this attention has to some extent diverted investigation from other most important points. There is positive evidence that eclampsia may be present with healthy kidneys. Two cases are given in detail, which came under the care of the authors—one in which violent and nearly fatal eclampsia occurred in a woman, where previous urinalysis failed to detect casts, albumen or deficient solids, when there was a nephritis developed after the aclampsia, and grew worse after the eclampsia subsided, but with good recovery finally.

Second, a case with 100 per cent. albumen, casts and renal insufficiency, but which went through confinement without the least sign of convulsions.

In case I, acetone was found in large amount. The conditions under which acetone appears, gives a clew to the cause of eclampsia. Its presence in leukocythemia, diabetes, inanition and puerperal infections indicate that it is the result of rapid katabolism. Retrograde nitrogenous change gives nerve and allied bodies as end products, and this is accomplished by the liver cell, but this is only one side of katabolism, the other is the changes resulting from the carbohydrate moiety; this is also accomplished by the liver cell, but is eliminated not by the kidneys, but by the bile.

When the child and mother send too much waste product to the mother's liver, there occurs an acute degeneration and inflammation of the cells, with retention of materials, which quickly break up into others, among them being eclamptic poison and acetone. This accounts for the known pathological changes following eclampsia of acute atrophy and the marked deficiency of bile.

The results of investigations are summarized, viz.:

I. That theory, that eclampsia is primarily a renal disease in all cases is untenable.

II. That eclampsia can be prevented by attention to the renal secretion, or that urinalysis furnishes adequate information on which to base an opinion of the safety of the patient is likewise untenable.

III. The poison of eclampsia is obtained from retrograde tissue products from fœtus and mother, and depend upon insufficient action of the liver cell. The non-nitrogenous moiety being the chief factor in those cases not accompanied by renal inflammation.

IV. In those cases, where uremia is present, attention to the liver will compensate for renal insufficiency.

V. The nephritis which attends eclampsia is frequently secondary and is analogous to the nephritis of scarlatina.

VI. The presence of acetone is a natural effect of the changes going on and the exact relation of acetone is not yet made out—it may be only a by-product. Acetone may prove of some value as a prognostic and diagnostic aid.

At a recent meeting of the Board of Trustees of the Jefferson Medical College, Philadelphia, Dr. J. Chalmers DaCosta was elected Clinical Professor of Surgery. Dr. DaCosta has been connected with the College for many years, and has recently been Demonstrator of Surgery and Chief of the Out-patients Department. The new appointment is made in recognition of his long service and valuable contributions to surgical literature.

Aortic Regurgitation.

In the February issue of the Albany Medical Annals, Dr. William L. Russell points out some of the special features of the clinical history of this lesion.

Alcohol and great physical exertion as a cause are shown in the case of a baker, who had been a beer-drinker, but had sound heredity, and had never suffered from rheumatism, syphilis, nor acute infectious disease. The absence of dropsy, and the presence of cardiac pain were noted in all the cases, two of which had symptoms suggestive of angina. Mental symptoms were present in all, in the form of depression, with talk of suicide in one case, and of excitability and restlessness in the others.

It was found that digitalis, although to some extent contra-indicated in aortic regurgitation, could, if properly administered, be used to great advantage. Small doses of Squibb's fluid extract were given when indicated by failing compensation, and were cautiously increased when necessary. The possibility of syncope was realized when it was as a last resort pushed in the later stage of the disease.

The forcible beating of the heart and arterial throbbing which proved a distressing symptom in a woman with degenerating arteries was most relieved by small doses of tincture of aconite root.

The relation of habits and mode of life to prognosis was shown in the case of a man of twenty-seven, who had been given to excessive drinking and smoking, and had been married a year. His disease had probably originated from an attack of acute rheumatism two years before, and there had been no symptoms except slight palpitation on exertion until during the two or three weeks last past, when he had suffered from dyspnœa. His heart beat very rapidly, but there did not seem to be decided muscular failure. In spite of treatment he died from gradual failure apparently of innervation in two months.

The value of rest as a remedy for failing compensation was shown in the case of a man who became suddenly hemiplegic from embolus, when his compensation had seriously failed. He was obliged to rest, much of the time in the recumbent position for four months, during which time, and for five months after, he became able to exercise, no cardiac symptoms requiring treatment appeared.

Treatment for Acne Indurata.

Dr. Engman, of St. Louis, in an article in the Medical Era, January number, brings forward an original view of the pathology and etiology of acne indurata. He speaks of acne indurata as that form of acne in which the lesions are deep in the derma, are large, indurated and of a congested hue, often containing confined pus, and becoming soft and fluctuating. From the researches of Unna and his pupil Hodara, who thinks acne due to one of the three sets of organisms found in the comedo. The form of acne depending on the organism most active. He thinks acne has a local etiological factor, not these dependent on an internal condition. Comedoes, as he states, may be formed from change in the secretions, from increased flow of secretion, from change in the follicle's wall, and lastly, from a lack of force in the unstripped muscle fibres of the skin, not acting with sufficient force to propel the secretion from the follicle. This he considers the principle local factor in acne indurata. the condition of the muscles being caused by an anæmia from toxic poisoning. The origin of the toxic condition having source in intestinal fermentation and absorption. He treats this causative condition first, before exhibiting any form of iron or tonic treatment, correcting the hepatic and glandular torpidity, and giving necessary stimulants to that effect, with intestinal antiseptics and proper diet. After the intestinal condition is improved iron and tonics are given. For local treatment he uses the usual antiseptics, as sulphur, resorcin in lotion and ointment. He does not believe in opening the little tumors to evacuate the pus, as this leaves a cavity allowing the skin to sink down into it with subsequent pitting and scarring. He tries to promote absorption or resolution of the pus and confined material by mas sage and local applications. For this a 25 per cent. tannic acid ointment is used. He deprecates the use of hot water and steam to the face, prefering cold.

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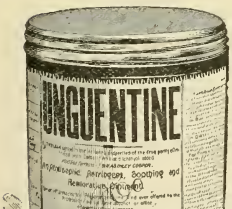

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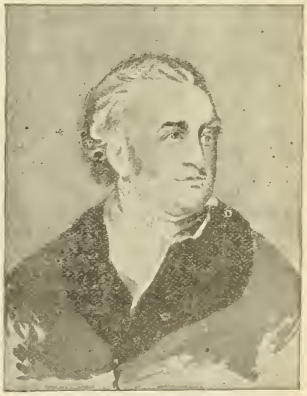

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The success of Fellow's Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of these, **finds that no two of them are identical,** and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, **in the property of retaining the strychnine in solution,** and in the medicinal effects.

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Medical Letters may be addressed to

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THE

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SURGEONS, OBSTETRICIANS AND HYGIENISTS.

Professor Syme, the distinguished surgeon of Glassgow, Scotland, is reported to have said, "the time is not distant when the Medical profession will be divided into Surgeons, Obstetricians and Hygienists." The emplication is that, when Hygiene shall have made such progress that all preventable diseases will be eliminated, there will be little or no occupation for practitioners of medicine.

The possibility of the fulfillment of that prophecy depends upon, first: the study and comprehension of the science of hygiene by all physicians, and, second: the education of the masses to the point of appreciation of the practical application of the principles of that science.

Notwithstanding that the average physician and health official continues to report deaths from diseases as natural, or which is the same thing, is caused by the vengeance of an angry God, in contradistinction to deaths by violence, it is true, nevertheless, that disease is not natural. Death from disease is as verily the result of the violation of law, as is death caused by a collision of trains. If, in either case, proper preventive measures were taken, the catastrophe would have been averted.

These are fundamental truths, and the sooner they are put into practical operation by Hygienist and people, the earlier will the prediction of Professor Syme be realized.

Next to Municipal Hygiene, by the application of which whole communities will be protected from disease and untimely death, the most important subject, in this connection, which can engage the attention of scientists and philanthropists, is what is known as School Hygiene. No argument ought to be needed to enlist the sympathy and interest of parents in any movement calculated and intended to protect their children, from the baleful effect of disease-producing influences; yet this important field is uncultivated.

Badly constructed, imperfectly lighted, illy ventilated, poorly heated school houses are the rule, with few exceptions. Children whose physical organizations are in progress of formation and development, are huddled into such structures, confined on uncomfortable seats, under rigid discipline five or more hours daily, with, perhaps, a single recess. Can any experience be more exhaustive of physical and vital energies? Girls are subjected to the same ordeals as boys, regardless of the broad anatomical and physiological difference between the sexes. Is it surprising that the youths of the present day have lost the vigor of manhood and womanhood which their grandparents possessed?

But, besides, teaching is a profession, to enter that profession, a certain course of study and degree of attainment are necessary; and to determine the qualifications of applicants, an examination by Board is requested. If the applicant is found to be proficient, a certificate is granted, What follows? They are teachers in name, only. They do not teach. Lessons are given to pupils which are to be studied and learned at home. Parents, not one of whom, perhaps, has passed the curriculum required of the teachers, most of whom are deficient in education, and few, if any, are instructed in the modern methods of teaching, are in fact, the teachers. The lessons, are in consequence, imperfectly learned.

This is the method practiced in the public schools, today. Exercise and amusement; so essential to growing children, are denied them, because the hours which should be thus spent and enjoyed, are devoted to preparation by study for the recitations of the next day. Is it surprising that children thus abused abhor schools and long for vacation?

If teachers were less regardful of their own comfort and pleasure, and more devoted to the practice of their profession; if lessons of only such length and numbers were required of their pupils as could be learned in school hours, under their

tuition, they would earn their salaries, more satisfactory progress in education would result, the children would take greater interest in their schools, and their health and growth would be enhanced.

PHYSICAL, INTELLECTUAL AND MORAL HEALTH.

None so well as the physician understands the effects of a diseased condition of the human body.

For, in addition to the physical derangements, with the attending pains, etc.; the five senses, constituting the windows of the mind, through which we learn our relations and obligations to ourselves, our fellows, to God and all creatures and things, become more or less darkened, depending upon the character of the physical derangement, called disease.

As a consequence of this, too, the intellectual development is impaired or hindered to a corresponding extent. The little child, even in health playful and lovely, becomes when diseased, cross or petulant, irritable and ugly, at times. And this continued shows a dwarfed intellectual development, sometimes bordering on idiocy, especially when allowed to eat vile candies and other trash, and perhaps food at irregular hours.

The same is true of the adult; the intellectural capacity depending largely upon a condition of health or disease. And this we see varying from intellectual weakness to insanity and even idiocy; caused, perhaps, by tobacco, opium, alcohol, licentiousness, and various other imprudences; really enjoying nothing, and barely tolerating existence.

Is not then the physician the arbiter of intellect, as well as of physical health, in the broadest sense?

The true physician is thus not only the arbiter of physical health' and intellectual capacity, when he teaches the laws of life and health, aiding people to keep well; or in restoring to health the diseased. For as the ethics of a community depend largely upon the intellects, as well as upon the physical health; the physician controlls, to a great extent, also the ethics or morals of a community. Thus are we, to a very large extent, the controllers of the physical, intellectual and ethical or moral health of mankind. In this, if true to our trust, we are working in harmony with the Infinite Being who created us; and has furnished us with all things necessary for our temperal and eternal well being.

CHARLOTTE MEDICAL SOCIETY.

It is with considerable satisfaction, if not pride, that we are enabled to chronicle the fact of the organization of the above named Medical Society. Features have been incorporated into this organization that the medical profession of this city have needed for many years. It includes both a standard fee bill and delinquent list. Both of these are essential elements in the success of the profession in a city like our own. They can but add to the unity and energy of the enterprise. Experiences in these organizations shows that in order to possess stability and effectiveness that they must possess something in addition to merely scientific and social features.

A PLEA FOR A LESS RESTRICTED DIET IN TYPHOID FEVER.

Under the above caption Dr. A. G. Barrs has an article in the British Medical Journal for January. He says from the number of cases observed that he feels justified in urging upon others to make a trial of the method of giving a more liberal and solid diet to all cases of typhoid fever.

He states that out of thirty-one cases of fever thus treated only three died, and in these three cases no solid food could be given; leaving the conclusion that they died from being deprived of the latter.

In regard to relapses being produced by these methods he states his utter disbelief in the notion. The solid food is to be withheld in cases with excessive diarrhœa, or where there is liability to perforation. But only in those and in the first stages of the disease, when the temperature is high.

We quote this much only to condemn it. As a rule, the English physicians are men of sense and medical training, but this is certainly a marked departure from those usual standards. A man who would deliberately advise the administra-

tion of solid food in a case of fever in this country would be severely criticised and condemned, no matter how great the authority he could cite that advised such to be done. There are certain standards of common sense aside from all scientific or technical knowledge, and one of them, which every person should know, is that solid food and typhoid fever cannot occupy the same bowel at one and the same time.

We trust that our contemporaries will pass this censure around, in order that some lives may be saved from this foolish practice of solid food in fever.

PERSISTANT PERIPATETICS.

We believe that the members of the medical profession have a distinct grievance in the harrassing methods persued by some reputable drug houses to get their preparations into notoriety and use. The average city physician has to be entertained by these enterprising and voluble peripatetics to the extent of about half his office hours each day. The marvelous claims and virtues of the various preparations are set forth in the most stupendous language of unlimited possibilities. As a rule, each of the "elegant preparations" is a panacea, and it is unnecessary for the practitioner to go any farther nor use any other kind of medication for the numerous ills to which all flesh is heir. The average physician is literally and eternally besieged by these representatives of manufacturing druggists. His time and opportunities are at their mercy and there is no apparent remedy. If the physician resists and kicks at his treatment by these people he is threatened with the statement that the preparation must go even if it has to be advertised in the public prints, private walls and fences. This is no exaggerated account of the situation, as many physicians can testify. Among them we can mention, at this time, the case of Pepto-Mangan (Gude), where there is a specific contract that the preparation shall only be advertised through the recognised channels of the medical profession. We are spared the alternative, in this instance, of use or we will force you to. We are in accord with the spirit of ethical and business fairness shown by the promoters of this preparation.

THE DECADENCE OF CALOMEL.

Any one who has kept note of the progress of therapeutics during the past fifty years cannot fail to have remarked that many remedies once much in vogue have largely gone out of use. This, to a certain extent, is true of calomel, though for certain uses this drug will probably never be superseded by any other.

It was formerly the custom to give small doses of this mercurial frequently repeated in nearly all the inflammatory affections, especially in peritonitis, pleuritis, pneumonia, meningitis, and in gastro-enteritis. Condie was one of the best exponents of this practice, and a glance over his "Diseases of Children," (first published in 1850,) will suffice to show the prominent place assigned to calomel in infantile therapeutics. One-fourth to one-half a grain of calomel, with about the same quantity of ipecac, was given every three hours during the acute stage of the disease. Essentially the same treatment was prescribed in acute peritonitis, and in colitis. In croup large doses were given combined with a little tartar emetic. "Of the good effects of calomel in croup," he says, "we have abundant testimony."

Elsewhere Condie gives the rationale of the beneficial action ascribed to calomel in croup (and similar considerations influenced him in prescribing it for other of the phlegmasiæ): "Its tendency is to reduce the laryngo-tracheal inflammation, and thus to counteract the pseudo-membranous exudation."

At the present day this old remedy has disappeared from the list of drugs habitually prescribed in croup, and none but the old fogies rely upon its repeated administration, as the sheet anchor, in any inflammatory affections. What power has it to hasten resolution, to promote absorption of exudation, to antagonize the pathogenic microbes, to restore tissue damage in an inflamed focus?

So greatly does the pathology of the present day differ from that of the past; so completely are we now dominated by the *damaged tissue theory of inflammation*, and by the new views as to the role of microbes in most inflammatory diseases; so fully are we persuaded of the truth of the modern doctrine of the natural evolution and self limited nature of all acute

diseases, and of the necessity of husbanding the vital resources, that the very idea of antiphlogistic treatment belongs almost with that of witchcraft to the superannuated notions of the past; while the true antiphlogistics are recognized to be such means, medical and surgical, as restore the damaged vital properties of the inflamed part and of the organism generally, and antagonize and combat microbes and ptomaines. From this point of view, the belief of our predecessors was not justified, by the facts. They saw patients get well from grave inflammations and fevers, and they attributed the recovery to the medicines which they had prescribed—an unwarrantable *post hoc ergo propter hoc* conclusion. They, in short, ascribed to the bleeding, the antimony and the calomel the favorable changes which belonged to the natural course of the disease itself.

There seems to be no proof that calomel, when given in minute doses, whether to oppose the formation and organization of plastic exudations, or to stimulate the secretive organs and promote elimination, or to arouse the absorbents to greater activity in removing inflammatory products, ever serves any really good antiphlogistic purpose. It does, doubtless, disturb the nutritive processes, and deglobulize the blood; it may even render the blood "aplastic." Whether, however, this be a good thing in an inflammatory disease, is not proved. Nor can we even invoke the help of the known microbicide properties of the mercurial, for there is no evidence that calomel, when given internally, in fractional doses, has any such microbicide action.

What are then the true uses of calomel in therapeutics. That it is still a remedy of marvellous potency we as firmly believe as ever, but shall have to reserve what we have to say on this subject for the future.

THE VIRTUES OF ANTITOXIN.

After a mature and careful consideration of the career and merits of antitoxin we are fully satisfied that the results attributed to it and the favorable statistics shown by it are attributable, not directly or positively to the remedy, but to the associated agencies in the treatment.

Whenever antitoxin is used little or nothing else is done in the way of auxiliary therapeusis. This is the important point. The latter is the cause of the successful recovery, should it take place and not the antitoxin which has been injected.

Diphtheria has always been regarded as a dreadful disease and the physician has been influenced by and participates in this dread. He begins to attack the disease vigorously from the time of its origin and the consequence is that the patient usually succumbs to the deadly and unremitting assault of drugs and potions. The internal, external and eternal use of whiskey, calomel, ipecac, Jaborandi, turpentine,tar,ammonia, opium, benzoic acid, Dobell's mixture, Lœffler's mixture, peroxide of hydrogen and a countless multitude of other things is what does the deadly work and not the disease. That diphtheria is nearly al ways an overtreated disease is beyond question. The fear and freaks of the physician are seen in their most exemplary form in this disorder. He becomes frenzied through his attempts to conquer the monster and the patient pays the penalty. We trust that the profession will pause a moment in its mad career and consider these suggestions. We are firmly convinced of the tenableness of the position here assumed and that antitoxin has achieved some success because it embraced, unconsciously, in its regime a feature which is here pointed out. The treatment of diphtheria, according to the conservative and best informed elements in the profession is to withhold drugs and assist nature and not cripple her.

CIRCULATION OF THE BLOOD.

Some investigators have been lead to doubt the full exactness of Harvey's explanation of the circulation of the blood, if that grand man did ever really demonstrate fully the exact plan; and forces that are required to make a healthy flow of the vital fluid. The ordinarilly received opinion is that the heart forces out the blood to the periphery, and that this force is continued for the return through the venous circulation back to the heart again, is doubted by some, partly because of the numerous membranes, tissues or muscles all along these blood vessels, which, by their contractions and dilatations measurably assist in the motion, and

because even though we know "nature makes no mistakes," yet it is doubted that she has supplied a sufficient resisting force in the blood vessels to overcome, resist, or stand against the constant uninterupted healthy flow of blood all along those tender vessels, at the calculated rate of *seven miles* an hour, or 168 miles a day, to say nothing of the vast increased pulse rate in disease.

Investigating minds, not always accepting all probable facts, are led by individual research to doubt even some seemingly plain facts, and, it is by these very doubts, and the comparing of opinions by other thoughts and by other investigations that we ultimately arrive at a fact, or its approximate. Some declare that this arterial circulation is not by complete transfer from artery to vein. Some say it is by *exosmosis*, others think it an endosmatic current. Some think this blood motion is a tidal motion in contradistinction to a current motion, and some think that the lungs has more to do with the blood circulation than merely to aerify this fluid, and that some propulsive force is added by the action of the lungs, and argue that if the current was as swift as calculated that it would not spread to and nourish every part of the body alike, but pass them by.

We know that medicine is not an exact science, but the near approach to exactness is always productive of good; then let us push our researches yet further, and not halt at opinions because enunciated by the great of earth, but by a calm, generous acknowledgment of past research and its authors show to posterity our gratitude for the noble workers who have preceded us.

REMARKS UPON THE NORMAL SALT SOLUTION AS A THERAPEUTIC MEASURE.

The good effects and splendid results attributable to the use of the normal salt solution injected directly into the blood, or into the cellular tissues, mark it almost as a distinct advance in modern therapy, one whose utility and wide field of application can not be measured, surpassing in these respects any other therapeutic agent or measure introduced or revived in the past decade. It is not a new discovery, but one revived, the favorable results therefrom pressaging its rapid and universal adoption by the profession. Already the profession, comprising the therapeutic world, has settled upon the use of the *normal salt solution* 1 drachm, or about 1 drachm of sterilized salt (sodii chloride) to 1 quart of sterilized water. The injections are made directly into one of the more superficial arteries; into a vein, "intra-venous," or under the skin into the cellular tissues, called "hypodermoclysis," and into the rectum as high up and as freely as possible—this latter method being called "entero clysis." A suitable apparatus can be improvised by attaching a long hypodermic or aspirator needle to a common Davidson's or Household syringe; the salt, 1 drachm, previously sterilized, should be dissolved in 1 quart of water, sterilized by boiling, and brought to a temperature of about 103° F., and kept at about this height, so that after passing through the tubes of the Davidson it will reach the body at about 98° or 99° F., the normal heat of the body. This temperature can be maintained, by having a receptacle, with an inner and outer chamber, with outlet to the outer one at the bottom, so that with the sterilized solution properly heated and registered by a thermometer kept in it for constant reading, it can be kept up to the necessary height by a frequent addition, by an assistant, of warm water into this outer chamber, letting out any excess through hole at the bottom.

These receptacles, syringe, etc., should of course be made thoroughly aseptic before using. By making a quantity of the saline solution, and with the frequent use of the thermometer, any simple vessel as a receptacle can be used in connection with the Davidson's syringe. Several apparatuses have been invented, the simplest having a glass receptacle to which is attached two or three feet of rubber tubing, with a long, small needle point at distal end for insertion into tissues under skin. A common fountain syringe can be used with proper needle attached and the bag held two or three feet above patient. Of course the surface where injection is made must be made aseptic. The groins, near armpits, and inner portion of thigh, are given preference as proper places for injection, having more cellular tissues, and the temporal artery

or vein of the arm where injection is made directly into the blood.

There should be great care exercised to see that everything is done aseptically, and that all the air is excluded from the instruments. With such care and suitable apparatus the operation is not difficult. Very little pain follows the procedure, but there is some swelling and smarting where a large volume of water is put into the tissues. The injection should be made slowly, and from 12 to 14 ounces used, never less than 12, and some authorities recommend the larger or full amounts whenever it is done at all. Used directly into the blood vessels smaller quantities will answer. It is more risky when used directly; the procedure called hypodermoclysis being generally preferred and used.

As a remedy for all forms of shock from injury, and that due to surgical interference, also that from excessive loss of blood during an operation, or from pathological causes, as post partum hemorrhage and hemorrhage from womb, stomach, lungs, or bowels, any of the vital organs; it is decidedly beneficial also in anæmias and the debility due to disease as well as conditions of nervous exhaustion from excessive strain or disease. Its effects in post partum hemorrhage, &c., used in the rectum, in sufficient quantity is said to be nearly as good as by other methods. The theory of its action is that it replenishes the volume of circulating medium, the normal salt solution being almost identical to that of the blood serum, and that by feeding the systemic vessels stimulates the circulation of the blood and the respiratory centres. The effect is rapid and marked and cases apparently pulsless, dead, so to speak, have been recalled or reclaimed by its persistent use.

In ordinary cases one full injection in 24 to 48 hours is sufficient—the effects are said to last fully 14 hours, and we would not advise its use oftener than every 14 to 24 hours. In cases of debility, with pulse and temperature running below normal, from disease or other cause, and in flagging heart action, lowered nerve and vital forces, it will give better results than digitalis, strychnine, nitro-glycerine, &c. Where the patient cannot swallow, and hypodermics of the higher class of heart excitants and stimulants may be contra-indicated, this procedure will stand you in good stead and bring relief.

Modern therapy has received no greater stimulus than the revival of saline injections, and will give to humanity no richer inheritance Its field of utility is utopian while its power to restore lost vital forces makes it the physician's avatar of normal functional activity or health, and health is life.

EUTHANASIA.

However much we may philosophise upon the idea of physical immortality, or the purpose of our Creator in allowing us to dwindle down from nearly a thousand years of human life, in the infancy of our race to an average now of less than forty, or may question the justice of our susceptibility to the various diseases that have sprung up, doubtless from our imprudences in the past, we may well demur, if die we must, to the death of pain and suffering we now have, and plead for *cuthanasia*, or an easy death.

And just here we must remember that all this suffering, at death, if not even our dying at all, may justly be charged to our own account, including our ancestors from the creation down, and not to the Creator. For a glance into the history of the past, shows a gradual shortening of human life, till a very recent period; as well as the gradual origin of various diseased conditions, that have sprung up, and are causing our premature death.

And while it may not be pertinent for us to even expect to regain our physical immortality, if thus created; we have a right to hope and strive for a continuance, of a gradual prolongation of human life, already commenced, to a slight extent, till "the child shall die an hundred years old," and many of the diseases that now afflict and destroy man-kind shall have dropped out, in the reverse order of their originating, who then should take a hand at this? Several parties besides the doctors, of whom they are, however, the chief. Mothers should properly feed, clothe, and care for their children, as tenderly as the birds do of their young. They should be allowed no trash; and food only at regular hours.

Fathers should use no tobacco, intox-

icating drinks, profanity or vulgar language; thus setting an example worthy of being followed by sons.

Clergymen should keep a clean mouth, and a pure breath, as well as to rightly "dispense the word."

Lawyers should dispense justice with mercy.

Sanitarians should be ever vigalent.

Finally, Doctors, as the guardian angels of all, should be alert, in the supervision of all, till euthanasia is attained, if die we must; if not, then physical immortality.

MINOR FACTS ABOUT BANDAGES.

To my mind many of the old and some of the new bandages are entirely too heavy, especially the unscientific application of the plaster of Paris, too often we see it too *thick* on the outer aspects especially over prominent points, such as the malleolar, the arch of the instep, or over the metacarpal or about the prominent parts of the wrist. Not only are these applications too heavy, but often applied too soon. I believe a light cloth bandage *over Surgeons cotton* fortified with paste-board, over which a nice light crinoline bandage is adjusted is eminently more applicable than the primary application of the Plaster Paris. Because it gives all the support necessary to a passive limb; it does not by excessive weight oppress the patient and mainly or greatly because it is easy to remove this bandage if any outward result was likely to occur, and because we want to see the parts about the fracture, about the 8th to 12th day. And then the swelling has subsided and a light Plaster of Paris bandage can be applied, and nicely adjusted to the limb, and fortified by cotton over projecting points, so as to secure against painful pressure. These little things carefully attended to marks Surical ability and enables the patient to tolerate his necessary inconvenience with more comfort and patience. The pressure of a heavy, hard, unyielding Plaster of Paris bandage over the ankle and arch of foot, is the most enervating, painful, aggrivation that could be inflicted on poor, unfortunate humanity. Then let us be careful to observe to do the minutia of surgery, as well as the major parts thereof.

If the surgeon does not like this style of bandage, there is a very light, serviceable one to be made or prepared on the spot out of celuloid.

MEDICAL ETHICS.

As a rule, the profession of medicine may be said to be conducted on a basis as ethical and as elevated, generally, as that of the other professions, though, whilst this is the case, yet it has not unfrequently been found wanting, to a greater or less extent, in that proper sense of professional honor and ethical fairness which should characterize it as one of the highest of our professions.

We have neither time nor space to enter into any more especial mention of the but too many ethical and other delinquencies in our profession; but as they have ever been but too common in it—degrading the dignity and respect, and injuring its usefulness—so it is probable that attention can not be directed too frequently to them, in order to their correction, and to relieve the profession, as far as possible, of them. Take, for instance, the physician formulating a scale of fees for himself, say, twenty-five or even fifty per cent. lower than that of the physicians around him, and thus by "undercharging" for his services, making a commerce of his profession, by offering them, in mercantile parlance, at the "cheapest rates." Next, take the practice of some physicians of public exaggerated mention of their medical learning and skill, in this way "electioneering" for practice on the score of their superior professional attainments. Or take the but too common habit of some physicians of making public exaggeration of their cases, representing them as "very bad," or "very dangerous," when probable the illness was only slight or insignificant; or, again, it may be, magnifying some simple disease into the more serious or grave—some simple fever, say, into typhoid, common colds with chest soreness from coughing, into pneumonia, and so on, *ad infinitum ad nauseam*, to call attention to what they would have the public regard their superior skill in the management of their reported graver maladies.

Of course, there would be but little difficulty in protracting this subject to subject to quite an indefinite extent, though

enough probably has been said to show —what can only be confessed—the but too frequent want of professional honor and ethical fairness in the profession, and to show likewise the justice and importance of relieving it of what thus could only ever be an incubus upon, and a disgrace to, it. Non-recognition of the guilty, or, where possible, the recall of license or diploma by State Boards of Health, or Medical Colleges, would seem to offer a fair solution of the trouble; at any rate, the subject can only claim our highest consideration, so long as these "crying evils" exist in the profession, and ever leave us hopelessly at their mercy.

POLLUTION AND INFECTION.

One of the most difficult lessons for hygienists to learn, it seems, is the difference between pollution and infection. Water may be polluted yet be free from infection.

A specimen of water is submitted to a chemist for analysis; he makes his report of the result, and declares: "The water is a thoroughly good, potable water." This was done at Richmond, Indiana, in 1895, and at that time that city was suffering from a wide-spread, fatal epidemic of typhoid fever, supposed to have been caused by drinking that "thoroughly good, potable water."

This, like hundreds of similar instances elsewhere, shows the utter unreliability of chemistry to determine this vital question. How can chemical analysis detect the presence in water of pathogenic germs? Chemical analysis easily determines the presence and percentage of inorganic matter in water. It can also detect the presence of organic matter; but can it decide whether that organic matter is dead or alive? innoxious or dangerous? Chemical analysis discovers the presence in water of chlorine, and thus excites the suspicion of sewage pollution, but can it positively assert that the sewage contains typhoid or other pathogenic germs? Certainly not. Not all sewage is capable of conveying specific disease; it must contain specific, disease producing germs, else water thus polluted is safely potable. The microscope, alone, is competent to settle the question whether water is safely potable.

Water may be offensive to sight, smell and taste, yet be free from infection, and, therefore, incapable of causing disease. On the contrary, water may be sparkling and bright, inoffensive to either, or all, of the senses, yet, if infected, it may produce disease.

Putrescent organic matter, such as meats, is not for that resson, unwholesome. Many persons prefer even strong smelling meats, especially game, and consume it with impunity; for the reason that, the germ of putrefaction—bacterium termo—is innoxious. Many good housewives keep meat before cooking till it becomes tender. They may not know that tenderness is the sign of commencing putrefaction; but it is, nevertheless. They do know, however, that it becomes more palatable. The difference between tender and putrescent meat is one of degree, only.

If hygienists will bear in mind the difference between pollution and infection, they will have clearer conception of what is harmful and what is wholesome, and will make fewer mistakes in the employment of measures of protection. More important still, they will rely less on chemical reagents and more on the microscope.

IS THERE A SELF-LIMITED DISEASED CONDITION?

That was a former idea that is now fast giving way to a better knowledge of anatomy, physiology, pathology, therapeutics and etiology.

Under the former idea, diseased conditions were regarded as involving, in a measure, an entity—the disease; more than a condition, perhaps; and so the patient was belabored with remedies, good, bad, or indifferent, to sustain life, till the disease could be subdued, or had run its course; on the principle that "it is a good mariner that conducts a ship through a storm, though he can't stop the storm."

And this idea was in part correct; in that, certain diseased conditions, caused by a specific poison, as the contagions, acting upon the human system, develop a train of symptoms occupying a corresponding time, in being eliminated from the system; and developing similar symptoms, to some extent. Hence it was thought to be a sort of necessity that the

disease, as it was called, should run its course, in about such a time; as for instance. typhoid or enteric fever, in about twenty-one days, etc.

But looking at the human "form divine," as a delicate instrument of the human mind; and considering the damaging or deranging effects of the various causes of diseased conditions, contagious and other, including of course the pathogenic bacteria, and calling into use the antiseptics, and various other remedial measures indicated, in each particular case; early thus destroying the cause, no disease, contagious or other, need run on, to eliminate the poison, already destroyed.

Hence we now, instead of trying to keep our patients alive, while the disease is running its course, may proceed, at once, to intelligently, destroy the cause; sustain the system, by suitable nourishment, tonics, and such other remedial measures as may be indicated; and thus abort, cut short, or render vastly lighter, all putrid, septic, contagious and other diseased conditions, as we may be called early or late to treat them.

THE USE OF BICHLORIDE OF MERCURY IN SECONDARY SYPHILIS.

It is contrary to the tenets of the regular or allopathic physician to prescribe remedies in Homœpathic or lilliputian doses, nevertheless such practice will occasionally meet the necessities, accomplish the same purpose and give equally as favorable, if not better result. For instance, as Bartholow recommends in cases of illeitis, where that portin of the bowel is principally the seat of the inflammation, denoted by the peculiar spinago-green stools, said to be characteristic, it is best to give calomel in minute doses, $\frac{1}{20}$th, or $\frac{1}{24}$th of a grain combined with absorbents, &c., and repeated until the actions assume a healthier appearance and the trouble is controlled. The authorities and most of our able siphallographers, taking a case of secondary siphilis with the characteristic eruptions, mucus patches, copper colored splotches, falling of hair, &c., in fact the typical symptoms, proceed at once to put the patient upon pills of protoiodide of mercury in sufficient doses, or the bichloride, straight in $\frac{1}{30}$ to $\frac{1}{10}$ grains, or the well known mixed treatment of mercury and potash, in constantly increasing doses. This is the usual routine treatment. It is rational and will if persisted in for a sufficient time relieve the symptoms, in fact it is claimed to more rapidly and thoroughly antagonize and eradicate the syphilitic germ; but these larger, full doses of mercury do so at the expense of the blood while after the patient is left debilitated, anæmic and exhausted, to say nothing of the risk of iodism, &c. We all meet with frail constitutions, persons whose vitality was already under par, before contracting the disease in question: these patients do not bear heroic dosage well and we should rather strive to conserve his vital forces while striking at the germ operating in his blood. Some years ago "Sidney Ringer" announced to the profession that the bi chloride of mercury in $\frac{1}{100}$ grain doses ter die had the effect of building up the red blood corpuscles and otherwise sustaining the general systemic forces, while at the same time the remedy in these small doses was sufficiently antagonistic to the syphilitic germ to check its ravages and with the same persistence in its administration would destroy the germ. The writer has witnessed the good effects of these minute doses, thus applied, in numerous instances, and for several years past has given it in this way, taking $\frac{1}{3}$ grain of the bichloride, one to two ounces of Tr. Gentian comp. and water s. ad ℥iv. putting in 10 to 15 grains of Iodide of Potash to each drachm; ordering a teaspoonful in a glass of water an hour after each meal; the dose of potash can be increased with each reduplication of the ℞ or can be given conjointly in saturated solution; so many drops with each portion of the bichloride and gentian mixture. Patients are put upon this treatment and allowed to eat and to do as they please almost, go about their usual work, only cautioning them as to sore gums, irritation of bowels, and excessive headache and instructed to report from time to time. It has been found safe and efficient, the symptoms clearing up, disappearing readily and with nearly the rapidity as under the more heroic treatment. The patient soon evidences the good effects in restored and increased appetite and heightened color, feels

stronger, sleeps better, with an absence of muscular and nodal pains and increases in weight. Having had good success, in fact, relieving my patients, many of whom now after 10 to 15 years are specimens of good health, with no recurrent symptoms. I can verify Ringer's statement. The $\frac{1}{100}$ of a grain of Bichloride does seem to sufficiently antagonize the syphilitic germ, so much so, as to check and controll it and seemingly like iron to improve and enrich the blood. You can prescribe it in combination with gentian and with or without the potash with safety and reliance; your patient is not restricted as to diet or liberty of action—forbidding only excesses, tobacco and alcohol.

SUCCESSFUL USE OF A CAUSTIC PASTE OR SALVE.

For the successful removal of lupoid, small epitheliomatous and malignant growths even of considerable size, the following ℞ has been found very successful. The chief ingredient is, of course, the chloride of zinc; whether or not it's action is in any way enhanced by the blood-root and common root we are not positive, but presume that it is not.

The ℞ is as follows:—Caustic paste for small Epitheliomatous tumors.

℞ Zinci Chloridi.....℥i
Sanguinaria Powd...℥i
Soot.....9. s.

Signa. Put the Zinc chloride in the sunshine until it liquifies, then rub up the bloodroot with it until it is a very stiff mass—adding a little soot or vegetable charcoal. It can be made stronger, that is, more active by using ½ the quantity of sanguinaria.

This combination makes a block, firmly consistant salve which is spread upon a cloth shaped to cover exactly the tumor and when applied and carefully and closely confined to the tumor or growth by adhesive plaster is allowed to remain on for from 12 to 24 hours; it is then removed and a salve used once every 24 hours until the eschar made by the zinc salve separates from the surrounding healthy tissues, and is kept up daily until the open sore fills up by granulation. This salve is composed of

℞ English Resin.....℥i
Bismuth Subnit.....℥ii
Vasaline (white).....℥i

applied on cloth and confined by strips of isinglass adhesive plaster. The parts are kept clean, but very little washing of the sore or cavity is found necessary, the salve being absorbent. There is very little pain except where it is used on large growths: any smarting can be relieved by a portion of codeia or morphine. The length of time the zinc salve should remain on any tumor must of course be regulated by its size, depth, &c:, and after the first eschar comes away under softening influence of the Resin salve, usually from 3 to 6 days in small growths, it may be neccessary to make a second application of the zinc salve. If not satisfied with the appearances, and there is doubt as to successful removal of all the growth apply it as fully over surface as needed for from 6 to 8 hours. We have used this salve or paste for several years with the most gratifying results and so far without a failure. It has done the work for us. It seems to have an electric affinity for the diseased tissue only, burning and destroying it just as it is, the line of demercation between the diseased part and surrounding healthy tissues being cleanly and sharply defined when the eschar drops out or is removed. We always state to the sufferers that removal by knife is considered safest and best, but they generally prefer any other procedure, and we do not hesitate to use this zinc salve, making patient agree to allow us to carry it out fully and also to stand any possible pain from the application for the requisite time. We could cite cases wherin it proved efficient but deem it unneccessary. On account of the natural abhorrence of the knife many of these small growths which at first constitute only a little wasty excresence, then an irritable growth, small but progressive, finally from neglect taking on an epitheliomatous appearance, may in the end result disastrously to the patient. From our success in its frequent use for several years in removing such tumors from the face, neck, ears and hands, we can say that disastrous results should be averted.

THE NIGHT SWEATS OF PHTHISIS.

There is no complication of pulmonary phthisis more distressing and often more noticable than the night sweats which prove so exhasting to the patie1

The pathogeny of morbid sweating has not yet been completely elucidated. We know, however, that it is a septicæmic symptom, and that it accompanies febrile cases. Purely apyretic forms are not attended with sweats. As a septicæmic symptom it bears a close resemblance to the sweating which is often seen in connection with suppurating abscesses (internal abscesses, etc.) where the elements of pus (or perhaps more correctly toxins forom some focus os suppuration) get into the blood, nor is the pathogeny essentally different. The night sweats of phthisis are due to toxins secreted by the bacillus tuberculosis, and perhaps associated m cro-organisms, which are absorbed into the blood and effect distinct parts, causing diaphoresis by paralyzing the vaso motor nerves of the arterioles distributed to the sweat glands, just as they cause fever by paralyzing the heat, regulating mechanism.

It is not probable that the *modus operadi* of the malarial poison as far as the chills and fever and sweats are concerned, is essentially dissimilar, not even the chills constitute the malarial crisis as a genus apart; for chills are also a septicæmic symptom, and the phthisical patient often has them before his sweats come on.

Whatever may be Nature's intent in these sweats they can hardly be looked upon as salutary, but are always depressing and destructive. Hence there is always an indication to arrest them. The remedies are legion, their very multiplicity indicates how unreliable they all are. Atropine, one hundredth of a grain to be taken at bed time, then twice a day, was first suggested by Vulpian, and often proves, at least for a while, very effectual. Other remedies much in use (we quote from Haris Practical Theraputics, and give the whole list) are: vinegar as a lotion; agaric in five grain doses every two hours (of doubtful value); a strong solution of alum as a lotion; belladonna (acts of course in the same way as atropine, might be given in ten drop doses of the tincture, twice a day); camphoric acid, twenty grains, taken an hour or two before the sweat is expected: ergot, forty grains, to be taken a few hours before the time for sweating (highly approved by Tenneson); gallic acid in ten grain doses; pilocapine, $\frac{1}{20}$ grain hypodermicilly two hours before sweat; sulphuric acid with belladonna or morphine (the aromatic sulphaic acid, taken about as sour as lemonade is an old remedy); zinc oxide in three grain doses combined with one tenth grain extract belladonna at bed time. Of course this by no means exhausts the list of drugs, as one can ascertain by consulting Sajous Annual and the number of professed remedies is growing every year.

A recent writer on the Treatment of Pulmonary Phthisis* (Darinberg) reasons correctly that if we can moderate the fever of the phthisical, we can entirely abate the sweats. The sweats always indicate the fall of the fever, and their violence is in the ratio of the height to which the fever has attained. The great remedy is antipyrine or antifibrin (acetanilid). Give the one or the other of these antithermics before the temperature rises or becomes elevated, for if you give it when the fever is high, instead of deppressing the sweats, you increase them. A vigorous rubbing of the whole body in the evening often prevents sweating. A good liniment to use with these frictures is equal parts of tincture of belladonna and brandy, sometimes you will prevent the sweats by keeping the patient in bed all day, instead of allowing him to walk about.

BOOK REVIEWS.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY, being a yearly Digest of Scientific progress and authoritative opinion in all branches of Medicine and Surgery. drawn from Journals, Monographs, and Text-Books, of the Leading American and Foreign Authors and Investigators. Under the general Editorial charge of GEO. M. GOULD, M. D. Philadelphia: W. B. Saunders, 925 Walnut Street, 1897.

This work is the annual review of the improvements in our means of defence against disease made during the foregoing twelve months and in these days of over production it cannot be regarded as superfluous. To the busy practitioner, indeed, it is almost indispensable, for it presents a brief but sufficient summary of all the new facts and ideas in the domain of therapeutics which are likely to be of

*Traitement de la Phtisic pulmonaire, Paris, 1892, Vol. 2, p. 201.

use to him in his daily round of professional duty. As regards the execution of the work it is enough to say that the contributors are recognized authorities in their several provinces. With the exception of Dr. Hardaway editor of the department of Dermatology, who resigned, his place being filled by Dr. Duhring, the editorship of the different departments remain the same as in the former edition. A new feature and a very useful one too in the present volume consists in the brief trend and results of the year's work preceeding each article. One great and leading feature of this work is its thorough condensation, so much valuable material in such compact form. Space will not permit the full description of the work which it merits, or such as our pleasure at its persural would prompt. The art of the publisher is well displayed in the choice of paper, type, engravings and binding. It is replete with original and selected illustrations, skillfully reproduced, thus insuring accuracy in delineation, affording efficient aids to a right comprehension of the text and adding to the attractiveness of the volume. The publishers deserve our thanks for the production of a work which is a boon to the English speaking medical profession.

A System of Practical Medicine. By American Authors. Edited by Alfred Lee Loomis, M. D., Late Professor of Pathology and Practical Medicine in the New York University, and William Gilman Thompson, M. D., Professor of Materia Medica, Therapeutics and Clinical Medicine in the New York University. To be completed in four imperial octavo volumes, containing from 900 to 1000 pages each, fully illustrated in colors and in black. Vol. I. Infectious Diseases. Just Ready. Vol. II. Diseases of the Respiratory and Circulatory Systems, and of the Blood and Kidneys. In Press. Vol. III. Diseases of the Digestive System, of the Liver, Spleen, Pancreas and other Glands. Gout, Rheumatism, Diabetes and other Constitutional Diseases. In Active Preparation. Vol. IV. Diseases of the Nervous System and of the Muscles. Diseases of doubtful origin, Insolation, Addison's Disease, etc. In Active Preparation. Per volume. Cloth, $5.00: Leather, $6.00: Half Morocco, $7.00. Lea Brothers & Co., Publishers, Philadelphia and New York.

The publication of the first volume of A System of Practical Medicine by American Authors marks a distinct epoch in the history of the science as taught and practised in this country. It is remarkable as being perhaps the most complete formulation of existing opinion that has ever been brought together. The whole has been edited and supervised by Dr. William Gilman Thompson. The present volume is on Infectious Diseases and a special feature of this volume is that it has been written by some twenty of the leading professional men of the day, each dealing with the branch of the subject on which he is the most competent to speak. Our views upon the infectious diseases have been so amplified by the study of bacteriology, that a book upon the subject by two competent, clinical and bacteriological observers, such as Drs. Loomis and Thompson are, is sure of a favorable reception. The enormous advances in this field of medicine are particularly well reflected in the opening chapter on Malaria. In the next five chapters are described the various fevers. Typhus fever is very properly included, owing to its occasional reappearance in our large towns.

Following these are treateses on Cholera by John M. Byron, M. D. Dysentery in its various forms by Hamilton A. West, M. D. The Plague by William M. Welch, M. D. Influenza by James C. Wilson, M. D., &c. More space has been given to the subjects of Enteric Fever, Diphtheria, Tuberculosis and Syphilis. It is a little unusual to find such an extensive treatise on Syphilis in works of this character. Detailed criticism of such a book is out of the question; the authors have successfully dealt with the protean mass of knowledge which is encumbered by many ancient prejudices and which have been within recent years the subject of aggressive activity and the scene of almost revolutionary charges. The work is beautifully illustrated both in colors and in black and the text is written in a style that is at once lucid and precise. As far as I have been able to judge from examinations of selected portions, the work bas been faithfully done, and the intellectual food offered to the reader is as palatable and digestible as literary pemmican can be.

The American System of Medicine is, therefore, a work of which every American physican may reasonably feel proud, in which every practitioner will find a safe and trustworthy counsellor in the

daily responsibilities of practice, and for which the publishers may justly and confidently anticipate a circulation unexampled in the annals of medical literature.

INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology and Dermatology, and Specially Prepared Articles on Treatment. By Professors and Lecturers in the Leading Medical Colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by Judson Daland, M. D. (University of Pennsylvania), Philadelphia; J. Mitchell Bruce, M. D., F. R. C. P., London, England, and David W. Finlay, M. D., F. R. C. P., Aberdeen, Scotland. Vol. IV. Sixth Series, 1897. Philadelphia: J. B. Lippincott Company, Publishers.

All that is necessary in reviewing this volume of the International Clinics is simply to announce that it is ready for sale. The reputation is established. One always look forward with a great deal of pleasure to the publication of this "Quarterly of Clinical Lectures" on Medicine, Neurology, Pediatrics, Surgery, Genito-urinary Surgery, Gynæcology, Ophthalmology, Larngology, Otology and Dermatology, by professors and lecturers in the leading medical colleges of the United States, Germany, Austria, France, Great Britain and Canada, for they are always full of fresh and useful information. This the fourth volume of the sixth series maintains its high pre-eminence as a periodical of great use to the practitioner. This volume contains 43 lectures from persons upon subjects of their own selection, of which they are most familiar, thus making it of infinite value to physicians. This volume contains many excellent illustrations, and forms an attractive as well as a useful contribution to medical literature.

HOW TO LIVE LONG AND WHY WE DO NOT LIVE LONGER by J. R. HAYES, M. D., Philadelphia, J. B. Lippincott Company, 1897.

The title of this little book is a good one, one that all of us are interested in. How to live longer is what we are all seeking. In this little book we are informed how to do this in a very interesting manner. The very important statement the author makes is that indiscretion in eating is probably the most frequent cause of failing health. The use of alcohol is still another frequent cause of early deaths. The book contains one hundred and eighty pages and is well worth the price of $1.00.

THE CITY OF REFUGE. A Novel by Sir WALTER BESANT. New York and London: Frederick A. Stokes Company, Publishers.

Sir Walter Besant is well known as a writer. His works in the past are all of high order and merit. The one before us maintains the excellent reputation of its predecessors.

TRANSACTIONS of the Colorado State Medical Society. Twenty-Sixth Annual Convention. Denver, June, 1896.

It has afforded me great pleasure to examine these transactions. The articles are well selected, cleanly written, and are brim full of useful information. Our thanks are due L. L. Liebhardt, the Secretary, for this volume.

LITERARY NOTES.

THE MARCH ATLANTIC.—Holding fast to its literary traditions, the Atlantic Monthly for March contains, besides fiction, travel, reviews, and reminiscences, five articles on subjects of the greatest public importance and timelines,—John Fiske's comprehensive discussion of the Arbitration Treaty; Woodrow Wilson's review of Mr. Cleveland's political career, and an estimate of him as President; Professor Hadley's clear statement of the good and evil of trusts and monopolies; Mr. Francis C. Lowell's article on the causes of the decline of legislative bodies and some remedies; and a true scholar's explanation, by Mr. Irving Babbitt, of Harvard, of the right place and use of the classes,—a defence of literature against the philologians.

Mr. Fiske's article sets the treaty in its proper relation to history; and by showing what has gone before and what must follow it, he gives it its logical place as an epoch-making incident in the progress of civilization from war and fear of war to the inevitable triumph of industry and commerce, when no people can afford war. Mr. Woodrow Wilson credits Mr. Cleveland with the strongest personality in our political life since Lincoln, as a conclusion forced by a discriminating review of the greater events of his two administrations. Professor Hadley points

out the very complex results, good and bad, of industrial monopoly and great combinations. The important social and economic effects are grouped and traced with great clearness; and the proposed and in the main ineffectual proposed restraints and remedies are reviewed. The decline of our legislative bodies is the most striking fact in our present political life. Mr. Lowell, who has had experience as a useful and observing member of the Massachusetts House of Representatives, makes it plain that the worst evils come less from the badness of individual character than from the bad system whereby we choose our legislators.

Lippincott's Magazine for March, 1897.—The complete novel in the March issue of Lippincott's is "Dead Selves," by Julia Magruder. It deals with the emotional and spiritual awakening of two highly superior persons who have managed to reach mature years, and go through a good deal of experience, without becoming acquainted with their latent possibilities—in short, their hearts.

"Father Sebastian," the hero of a short story by Kate Jordan, was one of the martyr-priests of the Parisian Commune. Owen Hall relates an Australian legend n "The Phantom Kangaroo."

"Sue's Weddin'," by Minna C. Hale, is a brief sketch with a sharp point. Helen F. Lovett, in "A Dilemma of the Day," shows how altruism may be overdone.

"Farming under Glass," by George Ethelbert Walsh, is a clear and instructive exposition of what has been done—which is very much—for human food by means of hot-houses.

John E. Bennett writes of "The Deserts of Southeast California," and Prof. L. Oscar Kuhns of the "Origin of Pennsylvanian Surnames." D. C. Macdonald tells what is to be seen "In the Manuscript Room of the British Museum."

"The Contributor his Own Editor," by Frederic M. Bird, suggests sundry ways in which writers could do their own work, now often neglected, to their own advantage, now often missed. Ellen Duvall discusses "Innocuous Vanity."

The poetry of the number, all brief, is by Florence Earle Coats, Carrie Blake Morgan, and Theodosia Pickering.

Life at Washington.—The inauguration of a President, the selection of his Cabinet and the seating of a new Congress give especial timeliness to the remarkable series of articles on various phases of the government by Secretary Herbert, Postmaster General Wilson, Attorney General Harmon, Senator Lodge and Speaker Reed, to be printed in The Youth's Companion during 1897. This series of articles and the many other brilliant features promised for 1897 show that now, on the eve of its seventy first birthday, The Companion is as wide-awake and as progressive as ever. The Companion's Art Calendar, lithographed in twelve colors is given to each subscri for the year '97. It is the most costly gift of its kind The Companion has ever offered. An Illustrated Prospectus may be had free by addressing

The Youth's Companion,
205 Columbus Ave., Boston, Mass,

The editor of the Review of Reviews comments in the March number on the Spanish program of reforms in Cuba, the United States Senate's attitude toward the arbitration treaty with England, the immigration bill, the proposed international monetary conference. President-elect McKinley's cabinet selections, the New York Trust investigation, the famine situation in India, the affair of the Greeks in Crete, the foreign policy of Russia, the position of England, France, and the other great powers, and many other matters of current interest.

Recent Triumphs In Medicine and Surgery. Dr. Geo. F. Shrady in the March Forum.—Cleansing of the wound itself was almost a surgical heresy a few years ago. Fouled bandages were the rule; and the thicker and more abundant the discharges the more "laudable" they were considered to be. Hence in the older works on surgery the so-called "laudable" pus was as much a sign of safety as it is now of danger. Cleanliness of instruments, now a prime consideration, was then entirely ignored. Oftenttmes the same instruments would be used at different times upon the dead as well as the living body; and a celebrated operator of that day was accustomed to hold his knife between his teeth when his hands

were temporarily employed in the wound. If a cut healed rapidly it was a rarity sufficiently great to court comment. Now the exact opposite is the fact. The former result was rather an accident of cleanliness than the deliberate acknowledgment of what should have been the rule. Consequently the most careful surgeons—those who possessed instinctive habits of neatness and cleanliness—were the most successful.

The most intensely interesting people of the world just at this moment are the millions of famine and plague stricken India. But little is known of this region by the people of the United States. Such reports as come to us are the things seen through British glasses. What has been the effect of British rule in India? Why these terrible famines? Why plagues? Julian Hawthorne has been sent by The Cosmopolitan Magazine to India to obtain answers to these questions at first hand and depict the situation as it appears to an American. The March Cosmopolitan contains the first of what is probably the most important series of articles ever presented in this magazine. Nothing has been published which gives an adequate idea of the large operations of business—at least nothing by the class of men fitted for such work by thorough familiarity with the subjects of which they write. The article in the March Cosmopolitan on "The Methods of Banking," by the President of one of the largest banks of New York—a man of widest business experience—former Postmaster-General James—is one which every person, however humble his clerkship or high his place in the financial world, will find interesting and instructive. This series will constitute a very complete course of business training, and every young man just entering business life and every old man will alike find it of immense value.

A Beautiful Magazine Free.—"Star of the South," Seaboard Air Line's new monthly, will be mailed free on receipt of three cents in stamps to cover cost of mailing, or will be mailed a year for thirty-five cents in stamps. Each issue contains complete stories of love, adventure and heroism, illustrated; descriptive articles on the South's progress; some pages of wit and humor, and articles of general interest. Address, C. Ironmonger, Advertising Agent, Seaboard Air Line, 371 Broadway, New York.

The Youth's Companion Calendar.—The Youth's Companion Art Calendar for '97 has just made its appearance, and a delightfully original and artistic one it is, too. The Companion's yearly calendars promise to become a feature of every well-regulated household in the country. The one for '97 is the most costly one of its kind The Companion has ever offered. It is printed in twelve colors, making a true reproduction of the original water-color paintings.

The size is 10½ by 24 inches. It is arranged in four panels, each containing the full length picture of a beautiful maiden most becomingly and appropriately attired for the season she represents. It is admirably suited for an ornament for mantel, centre table or writing-desk.

This beautiful Calendar is given free to all new subscribers to The Companion for '97, and all old subscribers who renew and pay their subscription for '97. Illustrated Prospectus for the year '97 sent free on application.

Address The Youth's Companion.
205 Columbus Ave. Boston, Mass.

The American Journal of Dermatology and Genito-Urinary Diseases.

This is the title of a new medical Journal that will soon make its appearance in the city of St. Louis. It will be edited and published by Dr. S. C. Martin and his son, Dr. S. C. Martin, Jr. Two men could not be found in this country better suited to make an enterprise of this character a greater success than these two gentlemen. Their names in connection with these branches of medicine and surgery, are perfectly familiar to every medical man in this country. We await the appearance of this new journal with unusual interest.

Some Clinical Jottings on Five Hundred Cases of Labor.

In the February number of the American Journal of Obstetrics and Diseases of Women and Children, Dr. Eugene R. Corson, of Savannah, Ga., contributed the first half of a paper of some length on

"Some Clinical Jottings on Five Hundred Cases of Labor." He showed the peculiarities and difficulties attending obstetrics among the colored, their indifference and shiftlessness, their liability to eclampsia and uterine fibroids, and the many complications resulting from diet and neglect. Of these 500 cases, there were 404 whites and 96 colored, and the large number of complications is quite remarkable. He pleads for thorough asepsis and antisepsis.

In the 13 cases of occiput posterior tabulated he opposes efforts at turning the head by the forceps and would permit only efforts at flexion, which failing, and there being any delay, he strongly advises the forceps, following the advice of Robert Barnes. Though more dangerous for the perieueum forceps delivery is almost as easy as with the occiput anterior.

He reports 3 interesting cases of Naegele Obliquity, all caused by pendulous abdomen and excess of waters; the head is set in its obliquity by the sudden rupture of the membranes.

There were 21 breech cases, 4 shoulder and 1 face presentation, the latter a very easy labor.

There were 12 twin births, and one case of triplets, all born alive and weighing 18½ lbs.

He reports 5 cases of uterine fibroid complicating labor. One case is of special interest, a fibroid, weighing one pound and 11 ounces, growing from the posterior cervical lip and filling the vagina. It was torn completely off from its attachment, as clean a tear as though cut by a knife, and a living child delivered by the forceps.

He reports 23 cases of eclampsia. He advises as rapid a delivery as consistent with the integrity of the soft parts under complete narcosis. He favors chloroform, chloral, morphia, and phlebotomy. He regards the albuminuria as but a symptom of the blood dyscrasia.

He reports a case of acute desquamative nephritis complicating labor, and *unattended by convulsions*, showing that eclampsia is not the result of the albuminuria or renal symptoms, but dependent upon a cause back of it. He reports in full a case of hemoglobinuria complicating labor and apparently threatening the life of the patient. The symptoms pointed to the live as the cause of the trouble. The ordinary albumineria of pregnancy was also present, and this case may throw some light an the nature of eclampsia. Pathologists are more and more directing attention to the liver as the origin of the trouble. The kidney theory will have to go.

We will give an abstract of the second half of the paper when it appears.

Intestinal, Anastomosis and Inguinal Colostomy.

Dr. J. A. Bodine of New York (Medical News, Jan. 9 '97) proposes a new and novel method of intestinal, anastomosis and inguinal colostomy. It is the first method yet offered whereby the exsection and restoration is effected entirely outside the peritoneal cavity. An artificial anus is first made with the spur so constructed that it can, subsequently, be divided safely and easily to restore the feacal continuity. "An incision of sufficient length is made and the parietal peritoneum carefully stitched to the skin. The lesion which has necessitated the operation (tumors, stricture, &c.,) is now sought for and when found is drawn throught the incision until 6 inches of healthy gut on each side of the piece to be exsected is exposed, *i. e.* 12 inches of gut plus the piece to be removed. The two limbs of the loop with the lesion as apex to the knuckle are laid side by side and turned so that the convex borders are in opposition. A running suture of fine silk beginning at the point where exsection is desired is carefully inserted uniting the two pieces of intestine close to and parallel with the mesenteric border for a distance of 6 inches, the suture is then continued round a horse-shoe and back to a level with the starting point. The suturing when complete looks like the letter "U." The sutured loop is now passed back into the abdomen until the point where the suture begins, *i. e.* the point where the intestine is to be exsected, is on a level with the skin surface and the loop stitched into the abdominal wound with a continuous suture of cat gut. This leaves the lesion protruding. If waiting is permissible twelve hours should elapse and then under cocaine anæsthesia the protruding intestine is

snipped off with scissors level with the skin. Having established an artificial anus we may now wait any length of time in order that the lymph thrown out may solidly unite the opposed walls of the sutured portions. The next step is the reestablishment of the continuity of the intestine. With a finger inserted into the opening of each portion of intestine to define the spur and guide the cutting instrument, the septum is divided with scissors along its median line for a distance of four inches. It will not be necessary to take out a wedge shaped section as passing faeces will prevent reunion of the septum. The abdominal wound may now be closed by any method which suits the surgeon or left to close by granulations."

The method possesses the three ideal requisites, (*a*) rapidity of execution, (*b*) safety of approximation, (*c*) ample anastomotic opening.

The Sterilization of Catgut by Boiling Alcohol.

Of the many methods which have been used for sterilizing catgut, the simplest and cheapest seems to be by means of boiling in alcohol. Many have found this method satisfactory and it is probable that the pus-bacteria are killed by it. But it is quite certain that it will not rid the catgut of the more resistent germs which almost all specimens contain. Most of these are non-pathogenic but it is by no means improbable that some specimens contain tetanus-bacilli or even anthrax.

Saul has shown that the addition of water increases the sterilizing power of alcohol up to 20 per cent. which is the largest amount of water that can be used without injury to the gut. The addition of carbolic acid still further increases the sterilizing power. As a result of these experiments, Saul proposed to boil the gut for 15 minutes in a 5 per cent. solution of carbolic acid in 90 per cent. alcohol.

Ralph C. Larrabee, of Boston, has recently made a series of cultures from catgut prepared by the above method, as well as a series of tests of the strength of the gut so prepared and preserved in various ways. Taking as a criterion the resistent non-pathogenic germs present in the catgut as it comes from the shops he found that Saul's method was efficient but for the large sizes of gut, more prolonged boiling was needed. The quality of the gut is but slightly changed.

Larrabee concludes that Saul's method is safe and efficient when used as follows:

1. Wind the gut in a single layer on pieces of glass tubing.

2. Place in a tightly-stopped flask with a condenser consisting of a glass tube five feet long and just penetrating the cork. Boil over a water-bath for 45 minutes in

Absolute Alcohol	850
Carbolic Acid (deliquesced)	50
Water	100

For the largest sizes an hour is safer and for the smallest 30 minutes are enough.

3. Remove the condenser, insert a stopper and preserve in the same flask and solution used for boiling; or pour off the solution, insert a sterilized cotton stopper and preserve dry.—*Boston Medical and Surgical Journal, Jan. 28, 1897.*

Erosions of the Stomach.

Turck (Ft. Wayne Medical Journa Magazine) has made experimental nd clinical observations on Erosions of he Stomach, and found that this condition is a local expression of a general vascular derangement, and therefore must be regarded as symptom rather than a pathologic entity.

A number of experiments were made on dogs to produce erosion of the stomach artificially. In experiment No. 1 and No. 2, mechanical and chemical irritation of the mucous membrane of the stomach produced no evidence of erosions of the stomach. Even when severe trauma was produced the mucous membrane healed promptly.

Experiments, Nos. 1 to 7, were then made by tying off the vessels (ligature of the gastric vessels and also portal veins) thus obstruction of the return circulation produced erosions, especially noticed when the veins of the lesser and greater curvature of the stomach were ligatured, then erosions appeared upon the mucous membrane near the area of ligature.

It appears from the experimental and clinical evidence that when the blood

stream, from various causes, becomes obstructed the nutrition of the vessel wall becomes impaired, and with the increased venous pressure the walls of the vessels become permeable at the weakest points, and where the blood pressure is greatest in proportion to the resistance and support, viz., the free surface of the mucous of membrane close to the mouth and neck of the glands.

Red blood corpuscles pass through the walls of the distended vessels. A superficial hemorrhagic area is developed, not unlike an infarct, followed by localized partial necrosis, which results in superficial area, becoming somewhat loosened, pieces of the mucous membrane easily falling off during any agitation, as vomiting, retching, or during lavage of the stomach.

In cases of erosions of the stomach, erosions were found also in other locations, such as mouth, pharynx, also the colon. Many so-called ulcers of the rectum presents more the appearance of erosions than of an ulcer.

In lavage of the colon are found particles of mucous membrane in the wash water similar to the small pieces of mucous membrane found in the wash water from the stomach of the same patients.

The subjective symptoms which are more or less constant is the sudden weakness that comes on at any time. The patients complain of a hollow, all gone feeling. Usually disturbances of circulation are found, such as congestion about the nose, ears, cold hands and feet, often complaining of cold, numb feeling, even as high as the knee. During lavage of the stomach small pieces of the mucous membrane will be found in the wash water and more especially if the patient retches considerably. There is but little bleeding, sometimes the wash water is scarcely colored.

Treatment.—The clinical and experimental evidence seems to show clear indications for a general as well as local treatment.

The indications are, first, the restoration of disordered circulation and restoration of the loss of muscular activity of the stomach walls. No drugs seem to be of much use in the treatment of the condition. As for local treatment, nitrate of silver is of assistance.

The local and general vascular effect is most required. This is best accomplished by the internal massage and vibratory effect produced by the use of the Gyromele (revolving sound), (Turck). For description of the gyromele (which is sponge on the end of a cable introduced into the stomach and an instrument for producing revolutions of the sponge within the stomach) see Wiener Medicin Wochenschrift, Nos. 1 and 2, 1895, Journal Medical Association, March and June 22, 1895, &c., &c.

Revolutions of the gyromele are produced from two to five minutes, once, and if necessary, twice daily, in the beginning of treatment. The effect is not only to remove adherent mucous from the stomach walls, but acts as a direct vascular stimulant. The vibrations are distinctly felt through the abdominal wall, which stimulates also muscular contractions. As the instrument can be drawn back and forth, all parts of the stomach is reached, and when the instrument is connected with a battery, electricity can be applied to all parts of the interior of the stomach, but one of the most remarkable effects produced upon the circulation is that gained by the "Intra-gastric resuscitator, (Turck,) which is a rubber bag connected with a double tube, introduced into the stomach, very hot water, 130° F., is then run into the bag (within the stomach) until one pint of water is introduced. In a short time the water, reduced in temperature, is allowed to run out and a fresh supply (at 130° F.) is introduced. (See Jour. Am. Med. Association, Jan., 1896, p. 79.)

The remarkable good effects are instantaneous, and after a few treatments become permanent. In severe cases a month's daily treatment may be required.

For still further general effect a bath is used, first introduced by Turck, 1985, (Wiener Med, Wochenscrift, Nos. 1 and 2, 1895,) in which the patient is placed in a bath at 105° F.; the temperature rapidly increased to 110° F. and 115° F. After patient becomes red he is removed from the bath and rubbed with ice. The results of the bath are remarkable in overcoming visceral congestion.

Extension movements are also advised. A new extension exerciser, devised by Turck, which he calls the H exerciser, as when put up in place forms the letter

H. From indications the combined treatment as recommended, is palpably rational.

Fractures of the Margin of the Acetabulum.

Prof. Edmund Andrews, of Chicago, gives in the Ft. Wayne Medical Journal-Magazine, some new facts on this important subject.

In his opinion more or less fracture of the rim occurs in a large part of the dislocations of the hip joint, the head of the femur striking the thin edge of the acetabulum with such violence that the margin gives way, leaving fragments of various sizes attached to the torn edges of the ligament.

Dead house examinations show in fact that the same injury to the rims of joints is found not only in dislocations of the hip, but in a large proportion of those of other articulations.

This important fact is very scantily noticed in the standard treatises, and the reader is led to think that when he has reduced the displacement his trouble is over, whereas, in part of the cases, there is such a gap in the margin of the joint that the head of the bone continually slips out again.

As the patient usually lives, no post mortem occurs, and the surgeon is blamed for the lameness, without any possibility of explanation.

Bigelow and others attribute most of the difficulty to the hooking of the head of the femur under the adjacent tendons, or under the sciatic nerve, or to the resistance of the untorn part of the capsule, but Dr. Andrews calls attention to the fact that in part of the cases the rim of the acetabulum is certainly broken away.

In one case, in Knox. Hospital, a recent dislocation of the hip was found absolutely irreducible, under every sort of manipulation, as well as the use of pulleys, and even of the famous "Jarvis' Adjuster."

On three different days the efforts were repeated in vain.

The usual surgeon of that ward, Dr. Wyllys Andrews, being out of town, Dr. E. Andrews made these efforts. The absent surgeon returning, the patient was transferred to his care, and Dr. Wyllys Andrews found it necessary to operate. He found a large piece of bone—an inch and a quarter in diameter—broken out of the upper and posterior margin of the acetabulum, making a large gap through which the head of the femur had escaped. The fragment was attached to the torn ligament in such a way as to turn like a gate on its hinges, and shut up the opening whenever the effort was made to move the head of the bone into the socket. He excised the fragment at last, and thus reduced the dislocation.

The patient had received an abdominal injury at the time of his accident, of which he died a little later.

Three other cases were reported, believed to be of a similar nature. In two of them there was no cutting operation, and the fracture of the rim was, therefore, not positively proven, but in the third an operation was performed, and a fracture found in a margin weakened by previous disease of the bone.

The head of the femur was also diseased. The head was excised, and the margin of the acetabulum treated with the gauze, and the patient made a good recovery, being able to walk on the limb.

Dear Editor:

In your Journal, page 67, Jan. 20, Doctor C. C. Fite is made to say "that the nature of Antidiphtheretic Serum in theory is very simple." In which we readily concur it is so simple that it is totally devoid of common sense, therefore decidedly simple.

He says; "The Klebs Loeffler Bacillus finds lodgement in the throat or elsewhere; it begins to grow and multiply; a membrane is formed; a poison is secreted and absorbed. Thus Toxine overwhelms the life centres; Paralysis and death may follow."

"Nature has in the meantime been endeavoring to overcome the danger that is threatening the patient and has secreted an antitoxin to destroy the toxin. This process was repeated millions of times for thousands of years, but we did not understand it; did not go deep enough into Nature's laboratory. Finally the Educational results of the germ theory had produced a long list of careful thinkers, and with the deep eye, the microscope and by the aid of vivisection

on animals, the secret was discovered and now all over the civilized world are laboratories for the production of the precious fluid." God save the remark "Precious."

He then gives a very graphic description of the manufacture of Loeffler's Blood Serum from a statement of one of these manufactures as to how the Toxin is produced. He says, "this Toxine is then injected into the jugular veins of the horse, and as Doctor Houghton puts it 'we must now stand aside and allow the remainder of the miracle to be wroeght unseen.'" It is now a miracle, not "the results of Education and the deep eye of the microscope," but it is an actual miracle. If a miracle, where is common sense? If we don't know what Antitoxin is, how do we know what the toxin is, if nature keeps part of the secret; why not keep the balance, if nature will not divulge how the Antitoxin is produced. Why does she so readily give up the secret of producing the Toxin? He says, "Our horse is then our laboratory but nature has kept the secret of how the Antitoxin is produced; all we have to do, *is to go tap our hoss* and we have the result, a package of Antidiptheretic Serum and we are ready to go on our life-saving errand." Ye Gods!! I will only add, if life is saved by such a Diarrhea of words and such a constipation of Ideal Thought, it must be a miracle indeed, it cannot be of earthly origin.

Now I would ask in all sincerity if it is a fact as admitted by a majority of Microscopists and Baunologists that the Loeffler Bacillus has a twin brother that cannot be distinguished from himself but who is harmless in his nature and if found in the mouths of healthy people as well as the sick and so far as we know, if fed on horse juice, may not become avaricious and destructive in character. Where are we to draw the line? May we not ask "upon what meat doth thou feed that maketh thee great?" as it is claimed that one is Pathogenetic, while the other is not and their strength or endurance is the only method of distinquishing the innocent germ from his prototype, but the venomous brother, whom we will call Loeffler Bacillus, the microscope has revealed the germ but the supporters do not speak of him as a living body but as an organ of secretion, secreting a something they cannot see, smell or taste, neither can they tell the modus operandi of its workings. The microscope, chemistry and Toxicology are silent as to where the Toxin is or how it exists or whether it exists at all; well may the supporters of such a doctrine call it a miracle.

I am thankful to Doctor Fite for relieving science from being paterna! to such balderdash, charging it up to the miraculous.

Now it is admitted by a great number of our leading Bacteriologists that the Baccillus are not found in contact with the healthy tissues but abound in the outer stratos of the membrane exclusively. Will our antitoxin friend tell us how the Toxine which is secreted by this germ, gets into the general system. Under these circumstances won't the "wonderful eye of the microscope" clear up this mystery by showing the highway between the home of the Baccillus in the outer layer of the membranes and the substrata and healthy tissues beneath or in some way tell us how these Toxines are Railroaded through to the absorbents?

The Doctor further says in regard to its use, he thinks if there are Streptococcus discovered, we should first use the antidiptheretic Serum and if the case does not yield, we should then use the Anti–streptococci Serum and not wait on the Bacteroiologist's report.

The Doctor evidently don't take so much stock in the Bacteroiologist as at first suspected, but is like the Doctor who made a specialty of treating fits, who, when asked if he knew what was the matter with the patient, replied, "No! but I can give him something that will throw him into fits and I am hell on fits."

It must be admitted that if Diphtheria only exists through a certain form of Microbic Poison, there is no Diphtheria. The Baccillus speedily die when it reaches healthy air, is destroyed by a ray of sunlight, is inoperative if lodged on healthy tissue; cannot live in healthy blood, therefore the whole fabric based on this theory, falls to the ground and must seek the same grave with Brown Sequards Elixir; Ovarine; Lumbarine: Testine; Thyroidine; Pasterine and the thousand and one other fads of the past and present.

C. B. Ferrell, M. D.
Columbus, Ohio.

Perfect Blood the Impregnable Citadel of Life; Can We Borrow it?

Nothing has been more indisputably settled by the modern science of biology than that health, or vitality, is as truly and practically the antagonist as it is logically the antithesis, of disease, of every form of disease, and of every cause of disease. And again, it is one of the most brilliant, and by far the most practical, of all the demonstrations of modern biology, that the principle we call health or vitality is not only seated, as mankind have always blindly believed, in the Blood, but also, that perfect blood is its impregnable citadel, carrying an armament against which the assaults of disease, whether by its antecedent germs or its consequent toxines, are forever impotent.

Upon this great truth, it is clear that an infallible hæma therapy might be founded, if only man could find means to realize the condition, perfect blood. Wanting this, the question yet remains: Can perfect blood be borrowed for man? On certain occasions, vital, if not absolutely perfect blood has been borrowed for the dying, by transfusion, and they have been saved. That was to supply deficient quantity of blood, and the means were obviously appropriate; but it was not understood' as it is now in the light of recent science, that blood of superior quality, or vital energy, if thus borrowed and introduced, reinforcing the weak or morbid circulation of the patient, would have power to antagonize, master and expel disease with all its hosts, microbial or toxic, from either tissues, organs, or enervated functions. But this is a strict logical consequence of what we now know of the remedial qualities and resistant forces of the blood. Can this logical truth be made practical? and if so, in what manner and to what extent? In a measure sufficient to make a great medical epoch, these questions are answered in favor of man by the actual applications of borrowed blood that will be clinically described in these pages.

It has now been abundantly demonstrated in practice, and only remains to be put into words and remembrance, that blood can be borrowed for us from the most vigorous animals, and supplied to our deficiency either of quantity or of vital power, by either of three modes of conveyance according to convenience or necessity, viz.: by subcutaneous injection into the circulation; by direct absorption into the system through the sides of the alimentary canal, upper or lower; or by topical application to any exposed or denuded tissue whatever, to which the native circulation of the patient fails to afford healthy sustenance and protection whether through insufficiency, paucity and sickliness of organic cells, or lack of vital and vitalizing energy. That this is literally borrowing life, is only another and more startling way of stating the fact, a fact emphasized in a most remarkable way by the observations of Dr. Brakenridge of Edinburgh, who found that the vital cells of injected blood not only reinforced the circulation by their own quantity and quality, but also revitalized and enlarged the debilitated cells of the patient, and excited an immediate proliferation of new cells.

But a last practical question still remains: How to get the blood we desiderate, in its pure incorruptible essence and vitality, on such terms as will be practicable for the general use of mankind, and of the medical profession in particular? The only solution of this problem so far attained—and one that seems as far satisfactory as can now be imagined—happened almost by accident to Dr. W. H. May of New York, in 1888. Baffled, like all his professional brethren, by an incurable ulcer, he tried the venturesome experiment of injecting around the sore a preparation of raw ox blood which had been up to that time known as a valuable invalid food only—"Bovinine." Astonished as if he had called up a spirit from the vasty deep, he beheld the Power he had invoked, charging from all sides upon the noxious area of disease with serried columns of vital corpuscles linked in tissue with the flesh behind, and weaving their encroaching parallels against the receding masses of the foe until an absolute victory was won, and the ruddy flag of Life waved over the long-disputed territory of death and corruption. The discovery of this Power was afterwards seized upon by Dr. T. J. Biggs, an assistant surgeon in the New York Polyclinic, a man of ripe accomplishments and experience, and of rare professional enthus-

iasm, who developed new methods and applications from the germinal discovery of Dr. May, up to the marvellous therapeutic scope and efficacy now exhibited by his clinical reports, which make the marrow of the pages to which the attention of the profession is herewith invited, but which are evidently a bare earnest of vastly greater things to come.

But have we a Living blood conserve?

The indisputable propositions above recited suffice to establish the vital virtue of a blood treatment, on the single condition that we have a practicable conserve of Living Blood for the purpose. No physician will dissent from the conclusion when convinced that it is practically possible to obtain and introduce into the system healthy and *still living* blood, endowed with the same vital force and effect that it exhibits in the natural circulating supply.

But, that blood can live outside and *after* the living body, and for indefinite time, with its corpuscles still charged with the mysterious power that we call Life, and still capable of imparting that power to the inert materials of nutriment and running them as a living product into the constantly vacated moulds of living tissue—this at first seems a supposition contrary to all probability, analogy, and experience. Nothing appears to be deader, if we may so speak, or swifter to corruption, than spilt blood, under the conditions in which we are accustomed to view it.

But, again, if we consider the case with which life is conserved indefinitely, in every other known depositary of life, by simply shielding it, as nature and art so often do, from the agencies of corruption—which may be taken for the *real* synonym of death—and if we remember the numberless instances in which animal life persists of itself as a latent deposit through long periods of suspension of every vital function—we shall find abundant precedents for reversing our *prima facie* presumption that blood corpuscles cannot be preserved alive, and for a probability that the vital power in the life cells, (deposited as it is at the bottom of all vital activity, *supporting*, not dependent on, organization and function), will persist independent of them in a suspended or latent condition, as all the other physical forces do, and as even organized bodies actually do, if simply shielded from intruding forces or the rupture of the protecting cell.

With abundant evidence of the persistence of latent life in all other depositaries if protected against the beginning of dissolution, what actual evidence have we that life will likewise persist in its cells of the blood if effectually protected, and also that its cells can be and really are thus protected?

That evidence is open to every properly equipped physician in any part of the world, in the two-fold observation, (1) of the visible condition of the preserved corpuscles, and (2) in their invariable exhibition of perfect vital potency when properly applied to a deficiency of the same in the human system or in any locality thereof. Any physician can satisfy himself of the perfect condition of the preserved corpuscles, by simply spreading a drop of "bovinine" on a microscope slide and examining it with a power of 800 diameters or upwards. If familiar with the aspects of living blood corpuscles, the observer will recognize the same aspects in every particular; the same dense crowd of shifting, changing, double-concave, smoothly rounded, yellowish red discs, that are described in treatises on the vital fluid in its vital state.

The other test, the final test—the *opus operatum*—requires more patience and medical science; but whenever fairly tried by a competent physician, in cases where the proper technique has been developed, it will settle the great question we have been discussing, beyond the possibility of mistake.

Turbinectomy or Resection of the Middle Turbinate.

Dr. J. A. Stucky, of Lexington, Ky., at a recent meeting of the American Laryngological, Rhinological and Otological Society, read a paper on "Turbinectomy or Resection of the Middle Turbinate: Report of One Hundred and Twenty Operations."

In this report he included operations upon the middle turbinate only, and referred to the removal of the anterior process. Removal of the inferior turbinate had been popularized by Carmalt Jones

and others of London, but from reports in leading journals he did not think that resection of the middle turbinate had received the attention it deserved.

The middle meatus being the most important division of the nasal cavity from physiological and surgical view, any obstruction that interfered with natural drainage might produce serious trouble and lead to purulent inflammation of accessory cavities. The operation is performed with cold snare (Wright's preferred) and cutting forceps, under cocaine and resorcine anesthesia (10 per cent. each in solution) applied on pledgets of cotton.

If ethmoid cells are involved, and filled with pus, polypoid granulations, &c., the sharp curette is used. In only two per cent. of cases reported has bleeding been sufficient as to require tampon. Have never seen an unpleasant result from operation.

In no case has atrophy of tissues resulted from the operation, on the contrary there is a slight tendency to hypertrophy of tissues covering tip of the bone.

In from six to nine weeks there is a certain amount of regeneration of tissue and a new and healthy process is the result. So far as observed there has been no interference of physiological function of the nose.

The following is a classified list of the operations performed:

1. Stenosis—due to hypertrophy or hyperostosis,	35	cases.
2. Polypoid degeneration,	48	"
3. Cyst of anterior process,	3	"
4. Acute frontal sinusitis,	7	"
5. Ethmoiditis (suppurative),	11	"
6. Empyema maxillary sinus,	16	"

Classes in which most rapid and marked relief followed the operatio were 1, 4 and 5.

The indications for the operation, whenever the turbinate pressed against the nasal septum, or encroached upon the inferior bone enough to close the middle meatus or in any way produce obstruction to the natural openings of the accessory cavities.

Laryngeal or Winter Coughs.

Walter M. Fleming, A. M., M. D., Examiner in Lunacy, Superior Court, City of New York; Physician to Actor's Fund of America, etc., in giving his experience in the treatment of the above and allied disturbances, in "The Journal of Nervous and Mental Disease," submits the following:

"In acute attacks of laryngeal or winter cough, tickling and irritability of larynx, faith in antikamnia and codeine tablets will be well founded. If the irritation or spasm prevails at night the patient should take a five grain tablet an hour before retiring and repeat hourly until allayed. This will be found almost invariably a sovereign remedy. After taking the second or third tablet the cough is usually under control, at least for that paroxysm and for the night. Should the irritation prevail morning or midday, the same course of administration should be observed until subdued. In neuroses, neurasthenia, hemicrania, hysteria, neuralgia and in short, the multitude of nervous ailments. I doubt if there is another remedial agent in therapeutics as reliable, serviceable and satisfactory; and this, without establishing an exaction, requirement or habit in the system like morphine.

Finally, in indigestion, gastritis, pyrosis, nausea, vomiting, intestinal and mesenteric disorders and the various diarrhœas, the therapeutic value of antikamnia and codeine is not debatable. The antipyretic, analgesic and antiseptic properties are incontrovertible, and therefore eminently qualified to correct the obstinate disorders of the alimentary canal."

The Fiftieth Anniversary of the American Medical Association.

Annual Announcement.

Office of the Permanent Secretary,
1400 Pine St., Philadelphia.

The Forty-eighth[1] Annual Session will be held in Philadelphia, Pa., on Tuesday, Wednesday, Thursday and Friday, June 1, 2, 3 and 4, commencing on Tuesday, at 10 A. M.

"The delegates shall receive their appointment from permanently organized State medical societies, and such county and district medical societies *as are recog-*

[1] There were no meetings held by the Association during the years 1861 and 1862.

nized by representation in their respective State Societies, and from the medical departments of the Army and Navy and the Marine Hospital Service of the United States.

"Each State, county and district medical society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number; *Provided*, however, that the number of delegates for any particular State, Territory, county, city or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Members by Application.—Members by application shall consist of such members of the State, county and district medical societies entitled to representation in this Association as shall make application in writing to the Treasurer, and accompany said application with a certificate of good standing, signed by the president and secretary of the society of which they are members, and the amount of the subscription fee, $5. They shall have their names upon the roll, and have all the rights and privileges accorded to *permanent members*, and shall retain their membership upon the same terms.

The following resolution was adopted at the Session of 1888:

That in future each delegate or permanent member shall, when he registers, also record the name of the Section, if any, that he will attend, and in which he will cast his vote for Section officers.

Secretaries of medical societies, *as above designated*, are earnestly requested to forward, *at once*, lists of their delegates.

ADDRESSES.

The Presidential Address, Nicholas Senn, Chicago.

Address in Surgery, Wm. W. Keen, Philadelphia.

Address in Medicine, Austin Flint, New York.

Address in State Medicine, John B. Hamilton, Chicago.

COMMITTEE OF ARRANGEMENTS.

H. A. Hare, 222 S. 15th St., Philadelphia.

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS.

Offered by I. N. Love:

Art. IV.—Officers. Amend to read "Each officer shall hold his appointment for one year, and until another is elected to succeed him."

Offered by the Executive Committee:

That there be made an Executive Council of five consisting of the three officers of the Executive Committee and two officers chosen by election. Of this Council of five, one must belong to the Section on Practice of Medicine and one to the Section on Surgery and Anatomy. To this Executive Council shall be delegated all the duties of the Executive Committee during the interval between its meetings.

Offered by H. B. Ellis:

Art. IX.—Conditions for further representation. "Any State or local medical society, or other organized institution whose rules, regulations and code of ethics agree in principle with those of this Association may be entitled to representation on the advice or agreement of the Judicial Council."

Offered by L. D. Bulkley:

To change the name of the Section on Dermatology and Syphilography to that of "Cutaneous Medicine and Surgery."

EXTRACTS FROM BY-LAWS.

"The Chairman of each Section shall prepare an address on the recent advancements in the branches belonging to his Section, including suggestions in regard to improvements in methods of work, and present the same to the Section over which he presides, on the first day of the annual meeting. The reading of such address not to occupy more than forty minutes." —*By Laws.*

"It shall be the duty of every member of the Association who proposes to present a paper or report to any one of the Sections, to forward either the paper or a title indicative of its contents and length (not to exceed twenty minutes in reading) to the Secretary of said Section, at least one month before the annual meeting at which the paper or report is to be read." —*By Laws.*

4.—The Publication of Papers and Reports. "Every paper received by this Association and ordered to be published, and all plates or other means of illustra-

tion, shall be considered the exclusive property of the Association, and shall be published and sold for the exclusive benefit of the Association."—*By Laws.*

OFFICERS OF SECTIONS.

Practice of Medicine.—J. H. Musser, Philadelphia, Chairman; J. T. Priestley, Des Moines, Iowa, Secretary.

Obstetrics and Diseases of Women.—Milo B. Ward, Topeka, Kan., Chairman; Geo. H. Noble, Atlanta, Ga., Secretary.

Surgery and Anatomy.—Reginald H. Sayre, New York, Chairman; Bayard Holmes, Chicago, Secretary.

State Medicine.—Elmer Lee, Chicago, Chairman; Louis Faugères Bishop, New York, Secretary.

Ophthalmology.—G. E. de Schweinitz, Philadelphia, Chairman; H. M. Starkey, Chicago, Secretary.

Diseases of Children.—Jas. A. Larrabee, Louisville, Ky., Chairman; H. E. Tuley, Louisville, Ky., Secretary.

Dental and Oral Surgery.—R. R. Andrews, Cambridge, Mass., Chairman; Eugene S. Talbot, Chicago, Secretary.

Neurology and Medical Jurisprudence.—W. J. Herdman. Ann Arbor, Mich., Chairman; Chas. H. Hughes, St. Louis, Mo., Secretary.

Dermatology and Syphilography.—A. Ravogli, Cincinnati, Ohio, Chairman; T. C. Gilchrist, Baltimore, Md., Secretary.

Laryngology and Otology.—Wm. E. Casselberry, Chicago, Chairman; D. Braden Kyle, Philadelphia, Secretary.

Materia Medica, Pharmacy and Therapeutics.—W. B. Hill, Milwaukee, Wis., Chairman: F. Woodbury, Philadelphia, Secretary.

Physiology and Dietetics.—A. P. Clarke, Cambridge, Mass., Chairman; Ephraim Cutter, New York, Secretary.

WM. B. ATKINSON,
Permanent Secretary.

Treatment of Amenorrhœa and Dysmenorrhœa with Apioline.

The normal menstrual flow depends upon the condition of the ovaries, uterus and tubes, and any disorder, either functional or organic of these organs, results usually in a disturbance called amenorrhœa. One of the most common causes of this disorder, is the non-ripening of the ovules. Again the menstrual flow may cease in a firm exudate mass. The increased sexuality developed by constant association of young girls with men, is largely accountable for amenorrhœa and dysmenorrhœa, but in most cases the causes may be traced to convalescence from typhoid fever, pneumonia, one of the acute exanthemata, tuberculosis, or generally defective hematosis. Gastric catarrh, fright, great anxiety, especially when of long duration predisposes to amenorrhœa. The various disorders which accompany menstruation often disappear with the cessation of the flow and the patient suffering from amenorrhœa feels better than she previously did. How often do we see pale, ill nourished girls, coming to us for treatment, when there is nothing functionally wrong, save the hot house life they constantly live in. I do not intend to speak of the organic lesions that may produce amenorrhœa, as they usually require operative measures, and it is not my object to go into the field of gynæcological surgery, but to show that in this class of cases, there is a therapeutic agent that can be relied on in their treatment. The emmenagogue properties of parsley have been long known, but its preparations could not be relied on, until the chemical investigations of Chapoteaut showed a means of preparing its active principle, Apioline. This drug is of a reddish color, has a decided odor of parsley, a density of 1.115 and a boiling point of 275° C. Laborde's physiological tests on animals show that Apioline increases vascularity and contraction of the smooth muscular fibres of the uterus and that it acts directly in the genito-spinal center of the medulla, thus giving a clear indication of its use. The drug has been carefully studied in Paris, and the following cases are typical of several in which I myself have used it:

Case I.—Miss L., aet 19, came with a history of irregular menstruation; for past three years it had occurred at periods of from three to six weeks, the flow is scanty and is accompanied by intense abdominal pain in the region of the ovaries and tubes; the pain being so severe as to cause attacks of syncope, followed by headache.

The case appeared to be one of acute amenorrhœa, and Apioline was exhibited, in doses of one capsule morning and evening, for two weeks, when menstrua-

tion occurred. To her surprise and gratification, the discharge was profuse, accompanied with but slight pain, no syncope or subsequent headache.

The last two periods have been normal.

Case II.—Mrs. J. F. B., aet 38, menstruation regular every twenty-nine days, accompanied with such severe pain, that she had to remain in bed for two or three days each time. Apioline administered in one capsule after each meal. At the first period the pain was less severe, in bed only one day. At second and subsequent periods, menstruation was almost painless. Here we see a well marked case extending over a period of fifteen years making a complete recovery from the use of Apioline.

LEON GARNER, M. D.

Footwear in Relation to Catarrh.

J. H. McCassy, M. A., M. D., of Dayton, O., in an article in The Medico-Surgical Bullitin, Oct. 24, says:

The condition of the foot today is deplorable, and we are forced to turn to the foot of the child, or the savage, or to that model of the foot of the ancients which has been chiseled on marble, for a perfect classic standard. The natural foot within its leathern prison has been distorted by the tyranny of fashion and the cruelty of restraint. The toes are twisted out of shape, thick projections from the toes at points of contact, clubbed nails, ingrowing toe nails, corns in uncanny situations, and bunions on the joints make the actual foot so far from being anything of beauty that it is only to be viewed in private by the chiropodist (thank heaven not the physician). Women are silly in trying to squeeze their feet into small, ill-shaped shoes that respect neither the form nor the mechanism of the foot. * * * Such a thing as a natural female foot no longer exists. The instep has been contracted. The well-marked great toe has been partially obliterated leaving the second one in the lead. The little toe has been pinched and squeezed until it has crouched and retreated like the rudiment of a supernumerary.

The feet of oxen, asses, and horses receive more attention than the human feet, because the proper condition and preservation of the foot of domestic animals represent in value of so much coin or bullion. * * *

The insane vanity of the wearers of shoes combined with the ignorance of the shoemaker have caused to be made a style of shoes that must result in great and lasting damage to our race. The so called elegant shoes have produced a painful picture of misery, inducing alteration and paralysis of the small muscles of the foot, which has resulted in the loss of the proper elastic step in the walk of many individuals. Compression of the blood vessels of the foot retards the circulation and prevents the full development of the bones and muscles of the foot, leg, thigh, and pelvis. The stalwart race of yore is being rapidly transformed into a race of spindle shanks since our people have become slaves of fashion.

Tight and ill-fitting shoes cause depression of spirits, headaches, heartaches, fainting, general fatigue, bad humor, and loss of serenity. The many fainting spells of women in public have been laid to tigh corsets. The truth is tight, ill-fitting shoes are responsible for a large share of this. * * *

The Chinese limit the deforming of the feet to the female sex, but we go one better and spare neither childhood, maturity, nor old age. The Chinaman wears a serviceable, well ventilated shoe, with a wooden sole and cloth upper, well suited to the city pavements in hot weather. The Indian moccasin and the baseball shoe meet the natural requirements of the foot better than the solid, unyielding shoes of our times.

Enamel and patent leather is surely the invention of the enemy of the human race. The former consists of calfskin with celluloid finish on the grain side, while the latter has the celluloid finish on the flesh side of the leather. The natural circulation of the feet gives rise to perspiration, which must remain in contact with the foot and macerate and excoriate the skin, because the patent and enamel leather is impervious to moisture. With our feet cribbed, coffined, and confined in tight, ill-shaped shoes having the hermetic seal of the varnish, we are not far above Chinese civilization.

A radical reform in footwear is necessary to secure well shaped feet, and the nature of the material of which the shoe

is made is of the highest hygienic importance. The proper shoe has a broad, low heel and flexible upper and sole. Unyielding canvas lining in shoes prevents the leather from stretching and interferes with the suppleness and elasticity of the foot; I am glad to say that dealers have assured me that the pointed toe shoe is rapidly being displaced by the round, fulltoe shoe; and that of late enterprising tanners have invented a process of tanning by which a soft, pliable, though heavy, serviceable waterproof leather is produced, known as box-calf, willow-calf, and Russian leather. Shoes made of this leather with a heavy double sole and invisible cork sole are now in the market for winter ware. The enameled leather shoe with invisible cork sole and the shoe just described are suitable for winter wear, but the patent leather shoe is neither fit for summer nor winter wear. In summer it is too hot and devoid of ventilation, and in the winter it is too cold and thin. Shoes made of tan leather are preferable for summer wear, because they permit the greatest evaporation and ventilation.

Sleeplessness from cold feet lead to the use of hot bricks and hot irons to the feet at night, while the cause of the insomnia, viz.: compression of the blood vessels of the feet by tight shoes, bad fitting stockings, and tight garters received no attention.

Compression of the feet during cold weather is a prolific source of frost-bites and chilblains. * * *

Washing the feet frequently does not make them tender, as many people erroneously believe. It really promotes nutrition and the general health, and prevents the formation of corns, ingrowing toe nails, and callosities. * * *

The best time to bathe the feet is just before going to bed. Water is the cheapest and best deodorant for the feet. Even the most delicate may perform the Dunkard act with benefit and safety by first using warm water which may be gradually cooled by the addition of cold water. Ointments and lotions so much in vogue for the preservation of the feet need only be mentioned to be condemned. Proper shoes and stockings and rigid cleanliness are the safeguards.

Unsuitable footwear is a menace to the proper development of our race. It causes chilling of the surface of the body in cold weather and the excretory function of the skin is stopped. Extra work is thrown upon the mucous membrane of the upper respiratory passages, causing congestion and idfiltration of it. No wonder about eighty per cent. of the American people are afflicted with catarrh, our national disease. * * *

Constant chilling of the feet and the surface of the body facilitates the formation of an excess of uric and lactic acid in the blood inducing the rheumatic and lithemic diathesis, and also causes the development of hyperasthesia of the nasal mucous membrane. These conditions put together frequently result in hay fever. Persons who work long hours in musty, ill ventilated rooms are liable to have the rheumatic or lithemic diathesis and catarrh, particularly if bathing and exercise are neglected. Wet feet have been the initial step in the causation of more sickness and deaths than any other agent known to us. The old adage "keep the feet warm and the head cool" is the great safeguard of health. Thorough bathing and brisk rubbing of the skin from one to several times a week are essential for the prevention and the cure of catarrh. In many cases under my observation, even after the footware had been properly reformed, it required a long course of treatment consisting of local applications, sprays, cauterization, and operative measures to cure the catarrh.

Dayton, O.; 32 W. Fifth street.

Minneapolis, Minn., Oct. 31, 1896.
The Resinol Chemical Co.:

Gentlemen:—The sample of Resinol sent me cared a chronic case of Scrotal Eczema, which has resisted all previous treatment for years. I am now prescribing it with unvarying good results in various cutaneous affections, and am satisfied that in Ung't Resinol we have the best local application for a wide range of annoying skin diseases that has ever been offered the profession.

Very respectfully,

C. G. Slagle, M. D.,
Prof. of Pediatrics, Col. of Phys. & Surg.
Med. Dept. Hamlin University.

A New Antiseptic to Cleanse and Whiten the Teeth.†

The subject of the care of the teeth is one to which the profession has heretofore given entirely too little attention. The proper care of the teeth is a potent factor in prophylaxis against infectious diseases, and physicians have frequently been disappointed in their efforts to cure certain ailments, which had their origin in carious teeth on account of their failure to recognize their true etiology. It therefore has seemed to me that a short article on this subject might be well received by the profession and conduce in a measure to an awakening on their part to the necessity of bearing in mind the relation of the teeth as a possible etiological factor in the causation of disease. Various chronic forms of dyspepsia, with all their distressing aggravations, may have their origin in the habitual neglect of the toilet of the mouth, but these are of minor importance in comparison with typhus and typhoid fever and Asiatic cholera, or with abscess of the antrum of Highmore, which is nearly always due to extension of the degenerative process begun in the teeth, and which requires the interference of the skilled surgeon.

The first warning the patient has of decay, is usually a sensation of pain caused by hot or cold fluids or sweets taken into the mouth. This means that caries have penetrated the enamel and the patient should at once employ a competent dentist.

Salivary calculus, or "tartar" of various color, is found upon the teeth of all persons. This is nothing more or less than a precipitation upon the surface of the teeth of the calcareous constituents of the saliva mixed with mucous. While this does not of itself, injure the teeth, it furnishes a place for the lodgment of food particles, and predisposes to decay. It also causes the gums to recede, laying bare the neck of the tooth, and inviting decay and causing them to loosen and fall out. Tartar, wherever found, should be at once removed.

The care of the teeth should begin as soon as the temporary set make their appearance. At first a soft brush should be used daily, and when the full set is present, the child itself should be taught the use of a brush, which will frequently become as second nature. The importance of thoroughly brushing *all* the surfaces of the teeth, cannot be overestimated. Most people, who pretend to clean their teeth, brush only the anterior surfaces, leaving the posterior surfaces and the interstices untouched. This is gross carelessness. After each meal a small rubber band should be drawn between the teeth and followed by the toothbrush.

The next question which concerns us is, what shall we use to prevent or retard these degenerative precesses. Dentifrices galore are upon the market, advertised to the laity direct, which in itself is not reprehensible, considering them in the light of toilet preparations—wholly ignoring the necessity of securing professional endorsement, which can only be obtained through high merit. Tooth-powders nearly always contain grit which scratches and wears away the enamel, thereby furnishing a point of attack for fermentative processes and micro-organisms of decay. Besides this draw-back, another and more serious one is met—the presence of soap. This being alkaline, besides "cutting" or dissolving the enamel and furnishing points of attack, will in a few months, stain the teeth and make them brittle. Even the tooth and mouth washes, which in other respects may have certain features of advantage, contain soap and soap solutions are always strongly alkaline in reaction. The alkalinity of the saliva is not pronounced enuogh to effect the teeth in any way, in fact is not of sufficient intensity to prevent the lactic acid fermentation caused by the micro-organism of decomposition. What is most required is an antiseptic preparation which will efficiently destroy all pathogenic germs without injuring the teeth or irritating the gums or any portion of the buccal cavity. Fortunately the profession has had presented to it such an article in the shape of Sanitol, the germicidal constituents of which are the new German antiseptics, Formol and Salitrol, derivitive of the coal-tar series.

These powerful antiseptics are perfectly harmless to living organic structures; they kill all pathogenic germs, arrest caries of the teeth and prevent all diseases which infest the system through the alimentary tract. In addition Sanitol

†Geo. H. Thompson.

presents many advantages not found in any other competing preparations. It contains no soap or alkali and cannot possibly injure the teeth or mucous membrane. It is pleasant to the taste, cooling in its effect, prevents and removes stain and sweetens foul breath, which effect persists for two or three hours after each using. Though penetrating in its nature, it does not cause toothache at a carious spot, but rather tends to allay this symptom.

Those who unfortunately must wear a plate of false teeth, will find in Sanitol the *cureka* of toilet preparations. In doses of ten to thirty drops, it effectively cures gastric fermentation. A few drops added to half a glass of water, forms a milky or pearly liquid which, being gargled, is rapidly curative in the early stage of tonsilitis and pharyngitis. In using Sanitol, for the teeth, it is desirable to dip the brush in pure water and drop a few drops of Sanitol upon the brush, polishing not only the anterior and posterior surfaces of the teeth, but with an up-and-down motion carrying the fluid into the crevices between the teeth, thereby enabling Sanitol to do its whole work. Any child can quickly be taught the use of the brush, and by using Sanitol, according to these directions, will become so habituated to the toilet of the mouth, that it will not feel at ease until it has properly cleansed its teeth. Those whose teeth are stained with tobacco or whose breath is contaminated with tobacco, spirits or the emenations of decay, or catarrhal inflammation of the air passages or alimentary tract, will find in Sanitol a long-sought boon—a complete exemplification of the proverb—"Cleanliness is next to Godliness."

Spurs of the Nasal Septum as Factors in Disease of the Respiratory Tract.

Dr. Edward P. Parker, of Charleston, S. C., in a paper read before the meeting of the Southern Section of the American Laryngological, Rhinological and Otological Society in New Orleans, March 3d, 1897, on "Spurs of the Nasal Septum as Factors in Disease of the Respiratory Tract," called attention to the radical difference, etiologically as well as clinically, between spurs and deflections of the septum. The former are the direct results of hypertrophic or vaso-motor changes along the sutural lines causing perichondritis or hyperostosis and, perhaps, secondarily producing stenosis, while the latter are primarily or traumatic origin, hypertrophic changes being only super-induced when the deviation is sufficient to cause stenosis.

Slight deviations produce no practical interference with nasal respiration and demand no attention, as a rule, but spurs of a size apparently too small to impair the respiratory functions of the nasal fossæ frequently affect other parts reflexly. In actual practice the symptoms arising from these two morbid conditions may often be the same, when originating solely from mechanical obstruction to nasal respiration, yet in those cases where the patient is aware of no impediment to normal breathing, slight deviations will produce no discomfort, while small spurs may cause extra-nasal symptoms.

These observations have often been confirmed by the beneficial results which follow the removal of seemingly insignificant spurs in patients who were unaware of any stenosis.

Spurs along the sutural lines dividing the perpendicular plate of the ethmoid and vomer, more commonly give rise to reflex symptoms than those situated along the suture separating the triangular cartilege and hard palate, because the former interferes with the region of the middle turbinate membrane which has its sensitiveness or irritability increased by the distribution of the filaments of the olfactory nerves.

Septal spurs, by reason of their situation, therefore, exert a powerful influence on the whole respiratory apparatus. The peculiar nasal twang, the so-called "dead voice," nasal catarrh, or hypertrophic rhinitis, chronic post nasal pharyngitis, purulent rhinitis, and chronic pharyngitis, are all familiar and common results of nasal stenosis and interference with nasal respiration due to septal spurs.

They are important factors in the persistence of adenoid growths, somewhat rarely found in adults, the atrophy of the latter at puberty being prevented by the irritation and vascularity induced by the spurs. The influence on catarrhal and sclerosing inflammation of the middle ear, is somewhat doubtful, as the obstruction

occurs upon the unaffected side very frequently.

Epistaxis, which is a common symptom of septal spurs, may lead to a suspicion of pulmonary hemorrhage, as in a case reported. The effect of septal growths on the larynx, trachea and bronchi were discussed, and cases of dysphonia, aphonia, bronchitis, dyspnœa, cough, dysphagia, cervical neuralgia and paroxysmal retching and hawking were cited or reported as sometimes of intra-nasal origin.

Iodothyrine in the Treatment of Obesity and of Fibroid Tumors.

The active principle of the thyroid gland has been used for several years with undeviating success in the treatment ment of myxœdema. This therapeutic procedure, although momentarily discouraged by a few unfortunate accidents easily explained by the inexperience of the early experimenters, is at the present day universally accepted.

Its general application and especially its extension to other morbid conditions has only been clearly shown since the introduction of iodothyrine. This substance which was at first called thyroidine may be considered as the true active principle of the thyroid gland. It is prescribed in the form of a white powder, free from disagreeable taste, and is taken in doses which average one gramme daily.

We know that at the present time this substance is prescribed in parenchymatous goiter, in myxœdema, in metorrhagias and in certain persistent cutaneous affections associated with a diathesis, (psoriasis, obstinate acne, etc.)

The modifications of structure and the cellular atrophy obtained in parenchymatous goiter could not fail to lead practitioners to experiment with iodothyrine in the treatment of obesity.

We have already called attention to the use of this substance in an article on "The medical and dietetic treatment of obesity in women," Journal de Medicine de Paris, Nov. 1, 2896; but the experiments which we made during the early part of 1896 did not seem sufficiently conclusive, because iodothyrine was always employed in conjunction with other established methods of treatment.

During the past three months we have repeated these experiments, using almost exclusively medication by iodothyrine and we believe that we are able to give a more exact account of its action.

The cases in which it has been used may be divided into three groups: simple obesity, without visceral lesions; obese subjects, with cardiac, pulmonary or hepatic complications, and lately, cases of fibroid tumor, with or without obesity.

Simple Obesity.—I have used iodothyrine in 17 cases of obesity; 14 being women, and 3 men. The results are as follows:

In 5 cases there was a rapid improvement and diminution in weight after 15 days of treatment without any other form of medication; the average dose being 2 grammes. In one of these cases I was obliged to interrupt the treatment on the fifth day in consequence of a pretty severe diarrhœa which markedly assisted in reducing the weight. It was this patient who fell off in weight most markedly (9 kilos within fifteen days). It is true that the attack consisted of very serious symptoms of acute gastro-enteritis, and might be considered as a case of that disease. I do not attribute this occurrence to the iodothyrine. In the other 4 cases the reduction began on the tenth day without any complication. The loss of weight after 15 days of treatment varied from one to six kilos. The twelve other patients were put upon a dry diet, and purgatives were used while they were taking the iodothyrine. The average loss of weight in 15 days was 4 kilos. In three cases, the iodothyrine was suspended on account of a burning sensation in the stomach and a slight vertigo after eating; they were able to resume the medication after a few days of rest. It produced nausea in one very fat woman, but this did not prevent its administration from being continued. I never noted palpitation. All in all, iodothyrine gave good results in simple obesity, and only rarely produced complications. These latter subsided promptly when the treatment was suspended.

It is probable that a longer course of observation would define more accurately the part played by the iodothyrine in the results which were obtained. They will, however justify the statement that this substance will without the aid of other

treatment, bring about a reduction without giving rise to serious complications.

Obesity Complicated with Various Diseases.—Dr. Hertoghe, of Anvers, who has used the thyroid products in women, has clearly formulated the contra-indications arising in patients who have pulmonary lesions.

I, therefore, proceeded with the greatest caution in using throiodine in two obese emphysematous subjects. I at first gave it in doses of 0.5 gramme, and then increased up to 2 grammes. I did not notice any accident and was able to continue its use through two periods of 15 days each, separated by an interval of one week. The result was satisfactory; one patient lost 7 kilos and the other 5 kilos. The asthmetic symptoms of the latter were improved, those of the former remaining unchanged. In cardiac cases (endocarditis of rheumatic origin) which came under treatment, I obtained the following results: In the first patient (57 years old) the treatment was suspended on the third day because it seemed to cause dysynœa; in the two others, iodothyrine was taken in doses of 1 gramme for 15 days without giving rise to any accidents, and with the result of reducing the weight 3 and 4 kilos. For the present I would suggest to the practitioner the advisability of watching the cardiac cases carefully while they are under this treatment.

Finally, I gave iodothyrine to 4 obese patients who had recently passed through attacks of hepatic colic, to which they were frequently subject. These four patients stood the treatment well and were very much improved by it. One of them lost 8 kilos in 22 days, in the case of the three others, the reduction was less rapid, 4, 3 and 5 kilos respectively. All of them had a slight diarrhœa during the first days of treatment, but this did not cause any annoyance.

In conclusion, I would say that I consider iodothyrine particularly adapted to obese subjects of the bilious type, in whom the gastro-hepatic function needs stimulation. These hepatic cases were given throughout the course of the treatment, a wine glassful daily of a laxative water (Apenta).

Fibrous Tumors.—I have not yet had time to make a long series of experiments on these cases and can only cite three which I will report briefly.

Case 1. Patient 37 years old. A large fibroid tumor made up of two lobes, one of which exceeds the size of the fœtal hand. Painful symptoms from pressure on the bladder; no hemorrhages, the patient is emaciated and the general condition poor.

I used iodothyrine with a view of reducing the size of the tumor. For nine days the patient took two cachets containing 0.5 grammes, daily. She then complained of palpitation and a feeling of oppression, and the drug was stopped. I was not able to make out any diminution in the size of the tumor, but by the fifth day the painful dysuria had ceased, thereby producing a considerable improvement in the condition of the patient.

Case 2. Fibroma of the size of the fœtal head occurring in a fat patient; very considerable hemorrhage with consecutive anæmia. In this case I used iodothyrine during two menstrual periods of seven days each. The dose during the first was 1.5 grammes, and during the second 1 gramme. It produced a very marked change in the amouut of the menstrual flow. The loss of blood which used to be very abundant did not exceed that of a normal menstruation. The fibroma was not reduced in size.

Case 3. The patient was 47 years old; she had a very large fibrous tumor almost the size of a fœtus at term. She had undergone various forms of electrolytic treatment without result. The metrorrhagia was very profuse, obliging her to stay in bed for 16 to 20 days each month. I used iodothyrine in doses of 1 gramme for twelve days, and then raised it to 2 grammes without noticing any accident due to intolerance. The treatment was suspended after the menstruation, which was less profuse than usual. After eight days of rest, the administration was resumed in daily doses of 2 grammes for twenty days. The patient was, therefore, under the treatment for two months, except for the intermission of eight days. The results were satisfactory. The fibroma which extended above the umbilicus had diminished in volume, and no longer caused the fatigue which was previously felt in walking. The patient felt relieved. But what seems remarkable was the diminution in the metrorrhagia. I was

only able to observe two periods, but the hemostatic action of iodothyrine was manifest. The patient was able to be up during her periods, which she had not been able to do for several years.

The results which I obtained were, therefore, favorable; while I may pronounce in favor of the action of iodothyrinc as far as concerns the reduction in size of the fibromata, its hemostatic action at least is evident. At any rate, the reducing action of iodothyrine upon the tissues is recognized to day by all the clinicians. Quite recently (Nov. 27, 1896) one of the physicians of the Paris Hospital M. P. Marie, has reported to the Societe Medical des Hopitaux, a case of myxoodoma treated successfully with iodothyrine Bayer.

DOSE AND METHOD OF ADMINISTRATION.

My experience and that of numerous physicians who have used iodothyrine has shown that the most suitable way is to commence with small doses of 25 to 50 centigrames each, in cachets or better yet in compressed tablets. † I have never given more than 4 grammes, but Prof. Paschkis of Vienna has given daily doses of 6 grammes for 15 consecutive days without any inconvenience in a severe case of psoriasis.

The difference between the minimum and maximum dose is, therefore, enormous. We have heard of cases in which two tablets have caused palpitations and attacks of snycope, while a very much higher dose has produced neither reaction nor concomitant effect. It is necessary, therefore, to ascertain in each individual case at the onset the dosage which can be tolerated. It is then easy to produce the desired effect by diminishing or increasing the dose.

The cases of obesity in general will stand pretty large doses. If they are well tolerated, 6 tablets of 0.25 grammes each are given during the first few days; after 3 or 4 days, 8 are given; after a week, 10; and at the end of a fortnight, the dose may be raised to 12. It is necessary to ascertain then, whether the loss of body weight has been too slight or too marked, and subsequently increase or diminish the dose according to the tolerance of the patient and the results obtained. I have noticed in obese subjects that it is well to suspend the treatment after 15 or 30 days, and resume it again in a week. The large doses do not act so well after a fortnight of treatment on account of tolerance becoming established in certain patients.

Finally the facts which I have observed permit me to endorse the efficacy of iodothyrine in the treatment of obesity. I am less positive about fibroid tumors as far as the reduction of tumors is concerned; but the women suffering from fibroid tumors with hemorrhages are always benefitted as the drug has an incontestible hæmostatic effect. Besides, even if the tumor itself is not diminished the neighboring tissues are relieved of their congestion, the compression of surrounding organs ceases and their functions are more readily accomplished.

I intend to continue my study of obesity and fibroid tumors and will communicate the result in a few months.

Journal de Medicine de Paris, Jan. 24, 1897.

DR. A. LUTAND, Paris.

† I first used iodothyrine in cachets, but I found it more advantageous for the patients to prescribe it in the compressed tablets of iodothyrine Bayer, 0. 25 grammes each.

The Cure of the Morphia Habit.†

The awful curse of opium hangs like a great vampire over the closing days of the nineteenth century. No one unfamiliar with the subject could be brought to conceive of the extent to which the paralyzing influences of drug habits have gone in our American civilization during the last quarter of a century. While there are many to which the lovers of intoxication look for relief from care and for sense of pleasure, it is *Opium* that takes the first place in sociological destructive assimilation.

No one who has not witnessed the horrible agonies—the unendurable agonies of the opium habituè of long standing can imagine the tremendous power of this drug over the structure of the organism. So far as alcohol is concerned, nothing is needed to abandon its use than a little nerve and a will to leave it off, because its sudden disuse is accompanied only by a short temporary ner-

†Thomas O. Summers, M. D., in The St. Louis Clinique.

vousness and irritability, and a proper selection of time and place for "*quitting*," with a few soothing agents to overcome the nerve quiver, is all that is required to "tide a man over," even the longest habitude. Not so with opium and its compounds. As the tiger creeps through the jungle onto his unsuspecting victim, so does opium on the yielding organism. There is nothing in all the range of physiology or pathology that can ap proach in strangeness of influence, in intensity of control, in permanence of result, the effect of the continued use of morphia in the organism. And more than this, I affirm it without hesitation or fear of controversy, that *no* man alone and unaided can endure the withdrawal of morphia, or any preparation of opium, to which he has been long or continuously addicted. For years I have endeavored to reach the solution of this most wonderful of physiologic and pathologic problems. Why is it that every individual nerve-cell of the organism is so altered in its functional activity that it only responds to the impulse of a peculiar agent, the deprivation of which, being, on the other hand, followed by exalted vibration, exhausted vitality and exaggerated sensibility, has been a problem which on ordinary principles of pathology could never have been solved? We now know that the cell–wall itself, an adventitious structure, not necessary in all cases to the integrity of the cell substance or the functional activity of cell-life and structure product, has the power, the most wonderful and non vicarious power, of taking to itself material, organic in its origin—converting to permanent environment this material to which the delicate nerve filaments are so sensitive. Now, when this peculiar pathologic reorganization of the cell-wall takes place by the infiltration into its plasmic environment this powerful stimulant of nerve vibration, we have, so to speak, an entirely new organism. We have a body that has taken on a new livery. Even the physiologic or normal processes of digestion, nutrition and assimilation must be conformed to this altered condition of every individual cell-wall of the organism. It is a new règimè. All of the functions are modified by this peculiar stimulus. No longer do the natural osmotic relations go on in the body by the simple physiologic methods. Around every cell, nerve, muscle, bone, ligament, in fact, every structural elements of the body, is enveloped an adventitious covering which modifies, alters, controls all the functional activity of the cell itself, and the Satanic influence of this awful power demands of every ultimate element of nutrition the *Shibboleth* of this permanent pathologic condition. To speak plainly and positively, once the cell has been covered with the opium film, which it requires but a short time to develop, there is no action, digestive, nutritive, assimilative, in any part of the body until the supply of this material to the adventitious envelop is furnished in sufficient quantity to keep it fully expanded. Withdraw this agent, which has originally developed the necessity for its continuance and made its presence in the organism a constant necessity, and what will be the effect? The scene would require the pencil of a Parrhasius, or the awful imagery of a Milton or a Dantè. I declare it, as a man of science, to be an absolute impossibility for cases of this character, however eager yearning, craving for freedom from this galling yoke, either by force of will or by the use of soothing agents similar in effect, to unwind the Anaconda coils of this serpent of the East. What then? It has been demonstrated that it is possible to remove this filmy cellular wall directly, so that if the drug should be suddenly removed there would not be that crenated con traction which always occurs after withdrawal and which causes the arrest of every organ and tissue in the body. The peculiar relation of phosphorus to the nerve system has long been recognized even by the veriest tyros in the profession. It has by a series of elaborate and very carefully conducted experiments under the eye and control of the greatest American physiologists been demonstrated that if a saturated solution of the phosphates combined with a large proportion of nitrogen was brought to bear upon the nerve cell, or, to speak more accurately, the trophic centers, there was no crenation; on the contrary the cell-wall puffed outward, there was no abnormal contraction upon the cell contents and a sudden influx of osmotic material which under the stimulus of the drug had been arrested. Never before in the history of medicine has there been such a demon-

stration of chemical power at the gateways of physiology for the administration of the saturated, or rather the supersaturated, solution of the phosphates with nitrogen in controlling proportions will simply restore all of the perverted, abnormally surrounded, or invested cells of every structure to their normal, natural relationship to the body; and with neither pain nor confinement, neither danger nor distress, the slave of pathology may become the freeman of physiology. I consider this the grandest triumph of the age. It is coming very near to the throne and scepter of physiologic authority.

The practical administration of these salts in the cure of the morphia habit must be conducted with great care.

In the first place, the character of the preparation used, representing, as I have said, the strongest and most concentrated forms, the nitrates and phosphates together can only be reached by very delicate and complicate chemical apparatus requiring machinery of strong pressure. The only concentrated form which is directly osmotic is known to pharmacy as melachol, the concentrated properties of which led me to believe that in it we had found the perfect therapeutic agent for this disturbed physiologic condition and after its use in over 200 cases I can honestly and with great gratification report that in only three or four cases have I failed to withdraw the drug (even when accustomed to thirty grains a day) entirely within three weeks. I have had but six relapses and these were deliberate. I have in four cases been compelled to use morphia for traumatic injuries four months after patient had recovered from habit, but along with the melachol there was no return or desire to return to its habitual use, for those who are once gloriously free from its clains generally shun it as a viper.

In administering melachol for the cure of the morphia habit, a large dose should be administered at the very outset. This, as anyone thinking for a moment would see, is for the purpose of putting each cell under the intense stimulus of a contrary or unusual influence. This breaks up at once the habitude. It is my rule *first*, on rising in the morning, to give two ounces of melachol largely diluted with water. After the toilet is made and just before breakfast, which should be very light, I give $\frac{1}{100}$ grain of arsenic in cases where "the lungs are weak," to use a popular expression, but to speak scientifically, to expand the air cells which, are sometimes collapsed, by a full dose of melachol, if not supported.

The other adjuvants (and what remedy for any pathologic condition is there that does not in the numberless permutations and combinations of this complex organism demand reinforcement from other sources than its own even well nigh specific effect?) may be summed up under the general head of tonics and it is usually better to prescribe the simplest. The following is the prescribed line of treatment in most cases; to be modified *pro re nata*.

On rising in the morning, one half tumbler of water and melachol, ℥ij. If difficulty of breathing: ℞ Fowler's solution, ℥ss.

S. Take five drops immediately after eating, three times a day, in a wineglass of water.

Coffee and rare beef at breakfast. No *pork* should be ever used.

If addicted to the use of tobacco, a cigar after each meal. Every three hours through the day take a teaspoonful of melachol.

Drink seltzer and milk at intervals through the day. Move out in open air, if atmosphere is favorable. At night just before retiring, take a hot hip-bath. Follow this with a strong whiskey toddy, or, if preferable, a strong cup of tea, for while these may seem antagonistic in effect, their ultimate effect I have found to be pretty much the same in these cases.

The next morning not so much melachol should be used, say only ℥j before breakfast, and afterwards through the day at intervals of three or four hours, according to the restlessness which appears. The arsenic—Fowler's solution—may be kept up several weeks with benefit. During this time the patient should only take the quantity of morphia allowed by his physician, which in most of my cases generally amounts to almost nothing. Pleasant suroundings, interesting books, intense pursuits all act powerfully to support a patient under this trying ordeal. I say nothing of his own will power, for the reason that the patient should give

himself entirely up to his physician, whose will should take the place of that which is temporarily suffused. Nothing further than this is needed in the most aggravated cases but the judicious handling of the arising symptoms by the physician and the kindly moral support which goes so far toward the favorable ultimate issue of all neurological cases. I have seen some of the most inveterate habitués cured completely within three weeks.

The Toxins of Diphtheria and Tetanus.

Drs. Brieger and Boer in the London Lancet, mention that the chief object is to separate these bodies free from all other substances. The zinc salts have been very generally used for precipitating toxins. The separation of the toxins from the zinc combinations is more difficult. The toxin must not be injured in the process, and other indifferent bodies must also be eliminated. Carbonic acid and sulphuretted hydrogen which injure the toxin are not available for this purpose. Sodium phosphate also impairs the specific properties of these toxins. They are destroyed by acids, but are not in the least injured by weak alkalies. Thus alkaline and neutral salts of the alkalies or so-called alkaline earths are best adapted for the purpose. It is possible to achieve partial success by using such substances in succession, but only the eombination of certain ammonia derivatives lead to certain success. Diphtheria toxin. After the peptone bouillon has been freed from bacteria, twice its volume of zinc chloride (1 per cent. solution) is added. The zinc precipitate is washed and shaken with a volume of ammonium bicarbonate (3 to 6 per cent.) equal to the original quantity of bouillon. Then ammonium phosphate is added,until everything is dissolved and the fluid becomes turbid, owing to the presence of zinc phosphate. The deposit is allowed to settle, and is filtered off. The filtrate is then saturated with ammonium sulphate. The deposit contains diphtheria toxin. The aceompanying peptone may be climinated by repeated additions of finely powdered sodium sulphate. Where the original nutrlent fluid contatns much albumen, it may be impossible to get rid of the albumen completely. For this reason the authors have used dialysed human urine as a culture medium. The specific diphtheria toxin is optically inactive. Alcohol, ether, acetone, acids, and especially carbonic acid, destroy it at once. Oxidising, but not reducing, substances also destroy it. By treating the diphtheria bacilli themselves with concentrated ammonium chloride, the remains of the soluble toxins can be separated out. That the substance seperated out according to the above methods is the same toxin as exists in the filtered bouillon is proved by experiment. After the complete separation of the above toxin the substance of the bacteria themselves still contains a body very injurious to warm blooded animals. The separation of this necrosis-producing substance has not hitherto been effected. The curative dose of serum does not counteract this last named poison. The authors have not been able to protect guinea pigs against this poison contained in the bacteria themselves. Unlike the diphtheria toxin, it is almost indestructible. Tetanus toxin. The amorphous tetanus toxin can also be separated out by the above named methods. It is desirable, however, to precipitate the toxin with ammonium sulphate, and then to add 10 to 20 c. cm. corrosive sublimate solution (0 1 g. to 200 c. cm. water) to the toxin again dissolved in water. Large quantities of the material have to be used to obtain the toxin. By the above named procedures, the authors have also inves tigated the toxin of botulismus, the toxins contained in the human cadaver, and such ferments as pancreatin pepsin, which differ considerably from the toxins. The results will be published later.

Paralysis After Mumps.

Revilliod in the Edenburgh Medical Journal reports a case where, directly after an attack of mumps, a boy, aged 7, became paralysed. Weakness of the legs was first noticed, and this was followed by dysphagia and rapid emaciation. The legs could be slightly moved, but he could not stand. There was left facial paralysis. Both eyes could be shut together, but the left not alone. The tongue could be scarcely protruded as far as the lips,

and deviated to the right, but there was no atrophy. The movements of the palate were sluggish. Swallowing was almost impossible, and liquids swallowed brought on a paralytic cough, so that feeding with the tube was necessary. Respiration was laboured and sighing. All four limbs were equally affected. The sphincters, special senses, general sensation, and the vasomotor system were intact. Faradic excitability of the left facial was diminished. Galvanism caused great pain but no contraction. The cranial nerves involved were: the sixth on both sides, the left facial, the right hypoglossal, the external division of the spinal accessories to the neck and the internal (recurrent) branches. Diagnosis: Infantile paralysis could be excluded and diphtheritic paralysis was thought probable, but all inquiries negatived this. There had been no case of diphtheria in the commune for 5 years; the boy's throat had been examined when the mumps began, and no signs of diphtheria were present; his brothers and sisters all had mumps about the same time. Under treatment (hypodermic injections of strychnine, massage, etc.,) the boy rapidly improved, and was quite well in about six weeks. It is not surprising that mumps, being an acute specific disease, should be followed by paralysis; nevertheless, only one other case has been reported.

Bromo-Chloralum.

By. X. T. Bates, M. B., Poughkeepsie, N. Y.

Bromo-Chloralum is a concentrated solution of chlorine, bromine, aluminum and potassium. It is styptic and a most powerful antiseptic, deodorizer and disinfectant. The actions and properties of its several elementary factors, are too well known to require elucidation, but its practical value seems to be less understood and less appreciated. My aim, therefore, on this article, is to direct attention to its merit as a medicinal preparation, with wide adaptability to diversified indications.

My familiarity with it covers a period of many years, during which time I constantly used it in active practice, and now speak of alike from observation and experience.

This compound primarily was introduced to the profession as a disinfectant and deodorant. In my hands not only has it maintained itself as such, but further, has proven so efficient and satisfactory as to merit my high laudation. Bromo-Chloralum is both colorless and nonpoisonous. These features attach to it an importance which ought not to be overlooked either in hospital or general practice or domestic use. While pronounced equally efficacious as the carbolic acid and chloride of lime, or the several metallic substances in like use, it is not open to the objections that can be urged, more or less, against all these, such as their odoriferous and toxic properties, which frequently carry with them a significance sufficient not only to render their use questionable, but under some circumstance, absolutely to interdict their employment.

Its uses, however, are not confined within the narrow limitations of a deodorant and disinfectant. It has a much more extensive application, subserving manifold purposes as a topical and internal remedy. Diluted with water, it is eminently serviceable as a detergent, stimulant lotion to scrofulous, weak and indolent ulcers, sloughing and gangrenous sores, dissection and poisoned wounds, and generally to offensive discharges from surfaces and cavities. Used as a gargle, it is recomended in highly hyperæsthetical conditions of the throat. It is a most excelent mouth wash to destroy the effect upon the breath of decayed teeth, foul eructations from the stomach, while, perhaps, nothing equals its efficiency to remove the fœtor in diphtheritic affections. I regard Bromo, in combination with the saturated solution of Chlorate of Potassium, and invaluable remedy in all cases of diphtheria. It should be employed, however, both internally and as a gargle. It also is worthy of attention as an abortive in typhoid fever.

As an adjunct in combating profuse flow of lochia it is a remedy of no little merit. This irregularity we most commonly meet with in women of a debilitated habit and relaxed fibre, producing all the effects of chronic hemorrhage, a condition which, in connection with other appropriate treatment, calls for some

stimulating astringent possessing both disinfectant and antiseptic properties—a demand most happily supplied by Bromo-Chloralum.

I am also convinced that the early use of this remedy, faithfully and systematically employed, will do much towards preventing toxic emanation and the absorption of putrid matter which at times are the acknowledged causes of septic-æmia and puerperal fever.

Bromo-Chloralum is a health preserving and air purifying preparation, stainless, potent, pleasant and safe, and a trial only is necessary to sustain the claims advanced for it.

The Bacteriological Diagnosis of Typhoid Fever.

Dr. Delepine in a paper read before the Pathological Society, Manchester, described all the most important methods used for the isolation of the typhoid bacillus from the organs of patients who have died from the fever and from the blood and secretions of living patients, as well as from external media, explained how the work of Pfeiffer, Bordet, Durham, and Widal had improved our means of bacteriological diagnosis. He also referred specially to the fact that, through Grünbaum had obtained results inferior to those obtained by Widal, he had, like the French observer, been working at the same subject in the early part of 1896. Owing to the facts, however; (1) That Widal was not acquainted with his work; (2) that Widal's results were fully published nearly two months before Grünbaum's; and (3) that, in Professor Delépine's opinion, Widal's results were more reliable, and were the result of much more extended experience, he thought that the credit of the discovery belonged entirely to Widal. He thought also that, although Widal's method was an application of Bordet, Gruber, and Durham's work, it must be clearly recognised as a real discovery. Widal's work differed quite as much from the work of Gruber, Durham, and Bordet as the work of these observers differed from that of Pfeiffer. It was certainly remarkable that after studying the action of the serum of immunised animals on the respective bacilli, Gruber and Durham should not have thought of seeing whether this method could be used to diagnose cases of fever in man soon after infection. This was also the more remarkable that Chantemesse and Widal, as far back as 1892, had advanced the view that the blood serum of typhoid patients acquired protective powers even before immunity had been established. It was quite as remarkable that Pfeiffer should have left it to Metchnikoff and Bordet to show that a considerable part of the reaction which took place in the peritoneal cavity of immunised guinea-pigs could be quite well and easily observed *in vitro*. But these were accidents which continually occurred in scientific work nowadays, when numerous observers were generally found to work under pressure of time at the same subject. Professor Delépine pointed out that having used Widal's method from the beginning of July, 1796, that is, immediately after the first announcement of Widal's discovery; and having with Dr. Sidebotham examined nearly ninety cases, he had come to the conclusion that when the test was applied with case it gave very reliable results. He pointed out errors which observers were likely to fall into from using unsuitable cultures and complicated methods of dilution, and attributed the success of his own experiments to the simplicity and accuracy of the method he had adopted from the first at a time when no description of other methods was available.

Hypertrophic Pigmentary Alcoholic Cirrhosis.

Letulle in the Edinburgh Medical Journal gives a detailed account of an example of this rare disease occurring in a male drunkard aged 43, who had been for three years under his observation with hepatic symptoms. The skin was not pigmented, the urine never contained sugar, and only when death was imminent from cardiac failure was there albuminuria. The liver was cirrhotic and contained new and false bile canaliculi, and showed the lesions of nodular hyperplasia and of pigmentary atrophy of the liver cells side by side. The spleen showed, as in previously recorded cases, but little pigment. Pigment was found on the pancreas, heart, lymphatic glands, thyroid, pituitary, and suprarenal bodies,

in the connective tissue cells generally, including Küpfer's cells in the liver, and in the choroid plexuses of the brain. The pigment contained free iron, as shown by the reaction with HCL and hydrochloric acid. There was some evidence showing that difficulty in excretion of the pigment had existed. Thus the kidneys contained very little pigment; the coiled parts of the sweat glands contained pigment but their ducts did not, and the seminal tubes were pigmented, while the excretory ducts of the epididymis were free. The other acinous and tubular glands of the body were free from pigment. There was none of this pigment on the skin or in the voluntary muscles, while the marrow of bones contained very little. The smooth muscles of the viscera and blood vessels showed an extensive granular pigmentary degeneration, but no reaction was obtained with HCL and ferrocyanide of potassium; the same was true of the nerve cells of the central nervous and sympathetic systems.

The Occasional Absence of Symptoms in the Subjects of Inherited Taint.†

It is a matter of much clinical importance to determine whether any large number of infants who really inherit a syphilitic taint escape, during early life, all symptoms which would betray it. My impression is that a very considerable number do so, and, further, that in such there is not likely to be any subsequent peculiarity of physiognomy or of the teeth. The teeth, however, may reveal it in cases in which the physiognomy shows nothing.

I have recently been seeing a lady from Australia who has ulcerations and bald patches on her tongue exactly like those due to syphilis. She has been considered to be syphilitic by her family medical attendant, and this opinion I must confirm. There is, however, no history of primary or secondary symptoms, and the taint is supposed to have been acquired from fœtal contamination. Her husband was known to have had the disease before marriage. Under these circumstances it became of importance to see the first born child, and I requested that she should be brought to me. A very pretty young lady of nineteen made her appearance at the next visit. She had perfect teeth, and no fault could be found with her complexion or any part of her physiognomy. She had, however, a "ringworm tongue" of the most characteristic type; crescentic patches, abruptly margined, extended over its whole surface. They were said to be, as is usual, liable to sudden variations in form and extent. The girl said that she had had this condition as long as she could remember, and that it gave her no trouble.

Now, respecting the signigcance of the "ringworm tongue" as a symptom there is much room for doubt. M. Parrot regarded it as always syphilitic, and he had collected many models showing it in syphilitic infants under his care in the Children's Hospital in Paris. For my own part, however, I may admit that I have doubted much whether this creed can be sustained. I have seen the "ringworm tongue" in syphilitic cases, but also repeatedly in those in which no suspicious facts were obtainable. The case which I now record is the second or third in which I have seen it in the children of parents known to have had syphilis, but in whom no indications of inheritance had occurred. I possess a drawing showing it in the son of a clergyman whom I had myself treated for syphilis before his marriage. The boy never showed any signs of taint, but he had a "ringworm tongue." If this condition of tongue be really due to syphilis it is very remarkable that it should, as in the case under comment, persist for nineteen years in its typical form without getting either better or worse and wholly unattended by other phenomena.

Another example of the absence of peculiarities in physiognomy in a child known to be the subject of inherited syphilis has just been under my notice. Miss S—— is twelve years old. Soon after their marriage her mother contracted syphilis from her husband. The child had, I believe, no infantile symptoms, but at the age of nine she had a very severe attack of keratitis, for which she was brought to me. I found her teeth quite characteristic, but her physiognomy was good with the exception of a scar at one angle of the mouth; she was well grown and florid. Her eyes recovered under

†Hutchinson in Archives of Surgery.

the use of specifics with setons in the temples. Three years later she was again under my care for synovitis of both knee joints with free effusion into the left. Concerning this form of synovitis it may be remarked that we know that it is com mon in the subjects of inherited taint. Thus we have the teeth, the keratitis, and the synovitis all confirmatory of the diagnosis, and yet their subject had, so far as was known, escaped infantile symptoms and had a good physiognomy.

Of late years much attention has been directed to the use of a commercial incandescent lightning system for electro therapeutical purposes, as this form of current is undoubtedly more reliable than batteries, especially in the hands of those who are not experienced in the care and attention required in handling the ordinary instrument for use, with cells heretofore on the market. Defective apparatus and the trouble and annoyance generally experienced by the practitioner in keeping a chemical means of generating current in order has done more to depopularize the using of electricity with the medical profession than anything else.

Current supplied from a dynamo undoubtly possesses all the properties attritbutable to that generated by batteries, but a means of utilizing a 110 volt direct current in the same manner as the current derived from a bank of cells has been a question which has long stood in the way of its adoption by physicians acquainted with the most successful means of applying galvanism. It has been repeatedly demonstrated that in the application of galvanism the best results are obtained by increasing or diminishing the strength of current with a raise or lowering of the voltage instead of resistance in circuit; for this reason rheostats for use with a direct 110 volt current have proven unsatisfactory as the voltage of the current remains practically constant and the volumn of current or am perage increased or diminished by more or less resistance in circuit, thus in applying one milliampere the voltage would remain practically the same as that of the current from which it is taken, making the current more painful and irritating in its effect.

The current necessary for any purpose should be applied with the least possible electromotive force necessary to overcome the resistance sufficient to give the required volumn of current.

Another factor which is not to be overlooked by the pbysician in choosing an apparatus for use on a commercial current is the danger involved by the use of a rheostat or any resistance in series with the patient as the rise of the voltage on the mains from which the current is derived would prove disasterous; for instance if the mains should come in contact with other wires carrying 500 volts or over the current administered to the patient would be increased in proportion. Safety fuses to prevent this are absolutely unreliable, and a fuse which would carry not over 1½ ampere, would allow sufficient current to pass to prove fatal. In applying current about the head, while at other points as much as ½ ampere is sometimes required.

An instrument lately placed on the market by the Electro Medical Company of Chicago, a Shunt Coil, is a new departure from anything ever before offered to the profession for use on a commercial current. This instrument is so arranged that the voltage of the current applied is increased, and diminished according to requirements; the patient being placed in shunt with the circuit instead of in series, thus insuring safety against fluctuations in the voltage on the mains.

With one of these instruments the current from the direct incandescant current can be utilized in precisely the same manner as cells, and can be used to operate any switch board or instrument designed for use with cells.

Dr. Daniel R. Brower of Chicago, in an article on Cerebral Syphilis-Diagnosis and Treatment, published in the Peoria Med. Journal, after detailing the various diagnostic points, outlines the treatment insisting this should be heoric once the diagnosis has been firmly established The iodides should be pushed to the point of toleration, and mercury should be given hypodermatically in large deses. While pursuing this vigorous course of mixed treatment judicious tonics and easily digested food will materially help the patient.

Galvanization of the brain is a valuable adjunct to the treatment of cerebral syphillis. Galvanic electricity is not so

much used as it would be if we had appliances more reliable than the ordinary galvanic battery for its administration, and electricians have been for years endeavoring to construct an instrument that would properly regulate the commercial current for medical purposes; there has been no difficulty in diminishing amperage, but to diminish and increase amperage and voltage, as is done in the chemical battery pari passu, has been the difficulty. This, the doctor thinks, has been overcome by Dr. R, V. Wagner, of Chicago, and he states that his instrument, manufactured by the Electro Medical Company, of Chicago, controls the incandescant current. With this any physician who has access to the incandescant current can administer galvanism with as much satisfaction and precision as with the best chemical battery.

Syphilis Without a Chancre. †

I have seen several cases in which the most careful search failed to discover any primary sore, and in which yet definite constitutional symptoms followed. The following may stand as an example: A young gentleman of 22 was sent to me by his surgeon on January 11, 1892. He had a papular erythematous eruption which I should have held to be characteristic if he had had a chance. But nothing of the kind was present. He admitted exposure to risk two months ago, but said that nothing whatever had been noticed on the genitals. I abstained from specific treatment until his second visit on February 2, when he was covered with an eruption about the nature of which no doubt could be felt. I again sought for a chancre but could find no trace, nor was there any definite enlargement of the inguinal glands. Mercury was ordered at this date, and I saw no more of the patient. In 1895 he came to me to know whether he might marry. He had taken mercury for eighteen months and had since been two years without it. He appeared to be in perfect health. He told me that he never had anything except the eruption, and that it had disappeared completely in a month or two under the treatment.

† Hutchinson in Archives of Surgery.

Obstruction of the Lachrymal Duct in Newborn Children.

Landolt finds that this condition is not rare, and is often overlooked till much harm is done. The affection should be inspected whenever there appears to be conjunctivitis in one eye only a day or two after birth. The conjunctiva itself is not infrequently cured, so to speak, by appropriate lotions. The obstetrician, mistaking a complication or result for a primary disease, finds to his surprise that the eye continues to water, the lids becoming glued together, and a drop of pus often exudes from the inner canthus. This condition is yet more alarming in certain cases where no conjunctivitis has been observed. It looks like the beginning of purulent ophthalmia. Landolt lays down as a rule that obstinate unilateral lachrymation in a newborn child usually signifies obstruction of the tear duct. As an ophthalmic surgeon he advocates sounding of the duct with a fine probe; on no account should the canaliculus be slit up. Afterwards weak antiseptic lotions must be injected into the duct by means of an Anel's syringe; the infant must be turned on its face directly afterwards lest any of the lotion be swallowed.

Puerperal Biliary Colic.

Eiermann says that the records of cases of biliary colic occurring after labour are few. He relates a case occurring in a primipara, aged 29, who suffered from albuminuria and œdema of the legs during pregnancy. Delivery had to be completed by forceps. There was a rupture of the perineum almost into the rectum which had to be stiched up. During the first four days the temperature ranged about 38.7° C., and only fell when the bronchitis from which the patient suffered improved. In five days' time the œdema of the legs disappeared, but now the author was suddenly summoned by the patient owing to shivering and severe pain in the upper part of the abdomen. On the next day there was distinct jaundice, which disappeared in two or three days. After this the patient had thrombosis in the veins of the legs, but ultimately made a good recovery. In this

case there had been no previous history of gall stones. The author would attribute the colic to the suddenly altered pressure relations in the abdomen after labour. It is not possible to speak very definitely about the frequency of gall stone colic in the puerperal state, but it is not so rare as has been supposed. Gottschalk has seen 9 or 10 cases in ten years. In one case the colic reappeared after a subsequent pregnancy, the patient having been free from it in the meantime. The diagnosis may be difficult if there is no jaundice. Kraus has recently stated that the first attack of colic occurs in a large number of cases during pregnancy or after parturition. Freund has seen undoubted cases of gall stone colic after the removal of large pelvic tumors.

Hypnotic Suggestion as a Cure for Functional Disorders of the Uterus.

Prof. Thos. Bassett Keyes said in a Lecture on Suggestive Therapeutics at the Harvey Medical College, March 8, 1897, that hypnotism will be found useful to allay irritation of perpherial sensitive nerves, especially of the uterus and its appendages, in amenorrhoea, and menorrhagia.

Bernheim in his Suggestive Therapeutics, reports two cases of menstural troubles cured by hypnotism. One was a case of retardiation, and the period was successfully suggested for a fixed day. The other was a case of profuse menstruration about every two weeks and the internal was lengthened to the proper time by suggestion.

Forel also obtained grand results in this class of cases.

I quote from a paper by myself on "hypnotism, its use in nervous functional disorders of the uterus and appendages," Oct 1896, issue of the Journal of Materia Medica.

In a selection of many chronic functional and nervous disorders of the uterus the results obtained cannot be too highly extolled. If its use in chronic functional nervous disorders of the uterus were more generally known, it would become requisite for by the use of proper hypnotic suggestion the nerve associations and nerve centers may become educated upon a correct basis, while the nerve centers brought into action by unhealthy and abnormal stimuli may be deadened, and the effect obliterated, at the same time everating and destruetive habits may be reguiated. The mental depression melancholy, hysteria, etc,, which often ac company these disorders of the uterus and the effects of previous causes which may have a physical origin or established the condition by excentric influence may be acted upon and removed by hypnotic suggestion.

So that in those cases of neuralgia, dysmenorrhœa in nervous amenorrhœa in which there is an absence or no conceivable pathologic condition the most satisfactory results may be promised.

True Diphtheria of the Penis with a Report of Three Cases.

Dr. William P. Munn, (Second Pan-American Medical Society.) This condition is probably one of rare occurrence and there are, so far as the writer can discover, no previous references to it in medical literature. It may occur whenever any operative treatment of the penis has been undertaken under circumstances that have permitted of diphthertic infection. Before bacteriologic methods of diagnosis were perfected it is probable that this condition was confounded with erysipelas, gangrene or simple septic infection following operation.

The three reported cases occurred in the practice of three different surgeons, in the persons of children, and subsequent to circumcision. In two the diagnosis was made by bacteriologic diagnosis, confined by a perfect succession of clinical appearances. In the other, clinical appearances alone led to the diagnosis. In one instance, the child's mother was suffering from a mild sore throat at the time of operation and the infection probably came from her. In another the patient's mother and brother were found to have diphtheria after the operation; it could not be stated whether they infected the child or the child being first infected, conveyed the disease to them. In the other case there was no recognizable history of infection, although the patient suffered from faucial diphtheria one year later.

All cases of infection of circumcision wounds in children at least should be subjected to bacteriologic examination, both to promote exact diagnosis, guide in the treatment of the case and to permit of proper precautions for the prevention of contagion.

Catheterization should not be resorted to, as there is danger of infecting the urethra and bladder.

The Etiology of Abdominal Abscesses.

Kreibich (The British Medical Journal) records five cases illustrating this difficult question. The first patient was 52 years of age, and was the subject of a perinephric abscess, the symptoms of which came on very slowly. The abscess was opened and recovery was rapid. The pus contained staphylococci in small amount; cultures reproduced the staphylococcus pyogenes aureus. The second case was also one of perinephric abscess of some what acute onset, though of even longer duration than the first. The patient, a man of 36, soon got well after evacuation of the abscess. No bacteria were found in the pus except a few rods and coccus-like forms within some of the leucocytes. All attempts at cultivation were unsuccessful, as also were experimental inoculations into guinea-pigs and mice. No tubercle bacilli were present, although the man had some infiltration of both apices. The third case was that of a woman, aged 43, who had a preperitoneal abscess of six weeks' standing. Operation effected a complete cure; the pus contained the streptococcus pyogenes. The first two cases resembled each other in their situation and their slow course; but while in the second the presence of pyelitis pointed to infection from the urinary tract, there was no evidence to indicate whether the first originated through the blood, the intestinal canal, or the urinary organs. The absence of living organisms in the second case may possibly have been due to changes resulting from the long duration of the disease; in this respect it would resemble those abscesses of the uterine adnexa in which the pus is sterile. The preperitoneal abscess in the third patient may have arisen by infection either from the gut or the gall bladder. The fourth case was that of a man, aged 33, who was suddenly taken ill with colicky pains, vomiting, rigors, and fever. Six weeks later a tumour was observed in the umbilical region, and, after another three months, laparotomy was performed, and an abscess opened reaching to the head of the pancreas. Five weeks later the patient died, and the necropsy revealed a perforated duodenal ulcer, which had led first to a local and eventually to a general peritonitis. In the pus of the abscess, the secretion of the resulting fistula and the exudation of the general peritonitis was found an encapsuled bacillus, which was proved by cultures and inoculations to belong to the same group as Friedlaender's pneumonia bacillus. The last patient was a woman, aged 52, whose illness, characterised mainly by anorexia and hypochondriac pains, had lasted four months when she was admitted. There was a tumour extending from the right hypochondriac region to the umbilicus; this was found to be an abscess, and was opened and drained, a good recovery resulting. In the pus a micro-organism was found having definite cultural and pathogenic characters, but the author was unable to decide whether it was a bacillus or a vibrio, and, after numerous experiments, had to leave the question open. He considers that the abscess arose round an empyema of the gall bladder conditioned by the entrance of this organism from the alimentary canal.

The Use of Antiseptics in Midwifery.

Dr. F. J. McNaught (British Medical Journal) writes: General practitioners will never adopt the antiseptic midwifery as long as thew can show results as good as, if not better than,any maternity in the United Kingdom. This they can do better practising in the slums of London or in agricultural districts, in spite of some of them not even taking the trouble to wash their hands before a *per vaginam* examination or to use an emollient of any kind. The Creator has designed woman so exquisitely that if she is only treated fairly and skillfully by her medical attendant she will defy septic germs.

Antiseptics in midwifery are all very well in maternities where a large number

of laying-in women are congregated, and where the mysteries of antiseptics strike awe into the unfortunate student, who, when qualified and practising on his own account, approaches a labour caee in terror for fear he might have a septic speck on his eyelash. Soon experience drives away his fears. Meddlesome midwifery is the curse of the age. This is what it is necessary to put down on behalf of motherhood, not the introduction of antiseptics into private midwifery practice. I have no hesitation in asserting that no one will ever be able to cnnvince the non-meddlesome practitioner that antiseptics; there they must remain, and feel proud of their glorious victories over their over-decreasing foes—the bacillus and micrococci.

Typhoid Bacilli in the Urine.

Dr. P. Horton Smith at a recent meeting of the Royal Medical and Chirurgical Society read a paper on the presence of typhoid bacilli in the urine of patients suffering from typhoid fever. Since the year 1886 various papers had appeared, for the most part in Continental journals, stating that typhoid bacilli occurred with great frequency in the urine of patients suffering from typhoid fever. The writers found them generally with great ease, and sometimes as early as the third day. The importance of such a statement, if correct, from a hygienic and diagnostic point of view was obvious. Later research had, however, shown that the methods of examination employed by all observers who had written on this subject were incapable of distinguishing the typhoid bacillus from others like it, and especially from bacillus coli communis, which was not uncommonly found in urine Hence all statements made hitherto as to the presence of typhoid bacilli in urine fell to the ground. The author therefore determined to examine the matter afresh. Seven typhoid cases had been examined, sixty-one observattons in all having been made. Method: Small and large quantities (filtration method) of urine, obtained aseptically, were inoculated on to the surface of gelatine plates. The suspicious colonies, if any, so obtained were examined by all "ordinary" methods for distinguishing the typhoid bacillus, and also by various special tests, not used by the former observers referred to, but absolutely essential if a correct diagnosis of the typhoid bacillus was to be made. These special tests were—(1) the cilia test; (2) the serum test; (3) the power of forming slight acidity in milk after twenty-four hours. These tests, taken together with the others, *did* distinguish the typhoid bacillus from all others like it, and thus the sources of error of former observers were eliminated. Results: (1) Three cases out of the seven examined contained the typhoid bacilli in the urine at some period of the disease, sometimes in enormous quantities; the other four cases never; (2) the bacilli were never found in the first or second week (seventeen observations). They first appeared in the third week or later. In one case they persisted in the urine until 22 days after the temperature had come down for good. Conclusions: (1) Examination of the urine was of little value for diagnostic purposes, since the bacilli only occurred in it, when they did so occur, late on in the disease; (2) the urine was often, though not in all cases, a serious source of infection, and should so be reckoned with.

Prognosis in Pneumonia.

Osler has recently pointed out that the higher the mortality the more difficult it is to estimate the elements of prognosis. Pneumonia is the most fatal of the acute infections of adults in temperate climates, the case mortality varying from 20 to 30 per cent. Some points on the prognosis are general, such as age, race, habits of life, and bodily health; others are special. Age is very important; in children the mortality, as quoted in Wells's statistics, is 1.9 to 3.3 per cent., while over 40 years of age the mortality is 50 to 80 per cent. Negroes show a higher death rate as a rule than whites. Kidney disease was present in 25 out of 100 necropsies observed by the author. Healthy adults seldom succumb; thus in the German army the death-rate in 40,000 cases was only 3.6 per cent. Of the special points of prognostic importance the degree of fever and the amount of lung tissue involved are far less important than the toxæmia. Toxæmia has no constant re-

lation to the extent of the lesion, and cases with profound toxæmia show wide variations from the typical clinical picture, while the local features of the disease are often quite overshadowed. Such cases early show cerebral symptoms, and are met with especially in epidemics and among old patients. Sudden death may be due to the action of the specific toxins, which probably affect the heart centres rather than the myocardium; symptoms of collapse may set in within the first twenty-four hours and rapidly prove fatal. The amount of lungs affected, even though extensive, is a much less potent cause of death than toxæmia. The depressing action of the toxins on the cardio-respiratory centres and the weakening effect of pyrexia on the heart muscle are important factors during the crisis, and help to explain the fact that venesection in pneumonia is not attended with such good results as in emphysema, morbus cordis, etc. Against toxæmia, which is the important cause of the high mortality, there are at present no reliable measures at our disposal.

Microbic Diseases.

Jaccoud maintains that microbial diseases may be divided into two distinct classes: (1) Those that are invariably of extrinsic origin, and which never exist in the normal organism, but can only be precent as a result of transmission from the outside; (2) those to which the doctrine of etiological dualism applies, in that they must be and often are of intrinsic origin, because their microbes may exist in a healthy organism without injury to the latter, becoming noxious only in consequence of changes undergone by the organism itself. There are two varieties of pathogenic microbes—the indifferent variety, the noxious action of which shows itself in different ways, according to the organic predisposition of the subject, for example, staphylococci, streptococci, pneumococci, bacillus coli communis; and those specific agents which produce invariable effects, such as the bacilli of tuberculosis, diphtheria, typhoid fever, etc. With specific microbes the introduction of the morbid agent and the onset of the disease are not isochronous. In some cases there is no disease, and the introduction of the microbes is without effect. In other cases the disease may not appear for an indefinite time during which the microbe remains in the organism without harm. This may be for months or years, until changes brought about by somatic or cosmic influences cause it to produce its special effect. The only known disease not dependent on the laws of the duality of the source and dischronism of the effects of infection are zoonoaes, eruptive fevers, and syphilis and gonorrhœa. In almost all diseases morbid autogenesis by changes in the organism is the rule and the traditional eteology based on heredity, congeniality, predisposition, constitution, temperament, or on somatic and cosmic influences, retains all its force. These multiple and variable elements are the true causes of disease; the the microbe is only the instrumental agent. The theory of etiological dualism as applied to all diseases with normal or indifferent microbes restricts the role of transmission from the outside, that is to say, contagion in all forms. A common error is that of considering any infection as recent and its results as immediate.

The Discovery of the Yellow Fever Microbe.

There appears to be no doubt that Dr. Giuseppe Sanarelii has discovered the bacillus of yellow fever. He will publish an account of his discovery in the next number of a leading Italian hygienic publication which will be issued in the course of the next few weeks aceording to the British Medical Journal. Dr. Sanarelli is a native of Arezzo, and is now 35. He studied medicine at Siena, and later experimental hygiene under Celli in Rome, Roux in Paris, and Behring in Berlin. In July, 1893, whilst libero docente in Siena, he was appointed Director of the Institute of Hygiene of Montevideo. During the summer of 1896. he went to study yellow fever at the lazaretto in the island of Flores, where he performed a large number of necropsies, and was himself stricken with the disease. When he recovered he pursued his investigations at Rio Janeiro where the disease was very prevalent.

He remained there about two months, and succeeded in discovering the bacillus. La Nazione, of Florence, has published an article sent by a correspondent in Montevideo which states that for some little time Sanarelli's modesty did not permit him to believe in his success, but in August his experiments were so clear that he was certain of the discovery of the microbe, and he then occupied himself wiih the preparation of the serum, in which he encountered many difficulties. Professor Sanarelli himself says that "the microbe of yellow fever now splendidly presents, and is the strangest of all the microbes that are known." His experiments are very extensive; he has vaccinated more than 2,000 animals, including rabbits, goats, sheep, monkeys, and a few horses, and he did all this himself because he did not wish his discovery to leak out. The results of the treatment are definitely reassuring, and in October, 1896, he decided to announce confidentially to the President of the Republic of Uruguay the splendid results that have crowned his studies in the origin and cure of yellow fever. If this remedy be truly efficacious, Dr. Scnarelli will obtain the reward of 150,000 scudi (£30,000) offered by the Brazilian Government for the discovery of such a remedy.

Healthy and Unhealthy Oysters.

Professor W. A. Herdman, of Liverpool, in discussing the relation of the oyster trade to the general public, and while recognizing that these and other shellfish can transmit infective diases, as exemplified in his own experiments carried with Professor Boyce, insists upon their importance as a healthy and valuable food. The "British Medical Journal" says he makes certain suggestions as regards obviating the risk of contracting diseases from their consumption, and at the same time reassuring the public so that the molluse may again come into as extensive consumption as formerly. This would be accomplished by some competent authority inspecting the different "layings." and certifying ae to their being exposed to no unfavorable hygienic conditions. The importance of having the oyster beds inspected by the central sanitary authority has frequently been insisted on in these columns, but the sanitary authority must have power not merely to grant a certificate as to conditions being favourable for oyster culture, but should also possess the power to prevent oysters from layings exposed to dangerous risks of contamination being put on the market. The difficulty now arises as to what should be done with foreign oysters—Dutch, French, or American—which may frequently have been obtained from very objectionable sources. Professor Herdman suggests that these oysters should be subjected to a species of quarantine by the use of what the French call *degorgeoirs*—tanks of clean water, in which the oysters ought to be placed for a short time before they are sent to the consumer.

THE USE OF THESE

is based upon the fact furnished by laboratory experiments that in oysters infected with typhoid germs subjected to running sea water a great diminution or total disappearance of the typhoid bacillus occurred in from one to seven days. He even suggests that fresh water might be used, and that the "housekeeper" should place the oysters in running water underneath the pantry tap, and states that even one day of this treatment makes a great difference in the washing out of the germs. The period of quarantine to which the oyster should be exposed, in our opinion, should be such as to exclude completely the possibility of subsequent danger, and the process should be carried out in natural running sea water. This could be accomplished by having the oysters relaid for at least three or four weeks in natural sea water, which should be subject to tidal or other influences ensuring a constant circulation of the water. If this system were adopted all foreign oysters and all natives originating from localities not licensed by the central authority would be subjected to this species of quarantine before being allowed to be put on the market. We cannot agree with Professor Herdman's recommendation as regards the use of tap water for oysters, and we suspect that most people would rather give up the consumption of oysters than partake of them after being subjected, 'even for one day," to the influence of running water from the pan-

try tap. The only effective method of obviating the risk arising from contaminated oysters is not one which would rely upon the consumer taking precautions, but is one which would consist in a central authority preventing all oysters from suspicious sources being placed on the market.

Compression Paraplegia in Pott's Disease of the Spine, Based Upon Statistics.

Dr. Gibney (N. Y. Neurological Society, January 5th, 1897,) read a paper with this title. He said that about nineteen years ago he had presented to this Society a paper on the same topic. The present communication included the cases seen since then. All authors agreed in relegating to laminectomy the cases apparently hopelessly incurable It was true that in a few cases the results of operation had been extraordinarily good. He believed that iodid of potassium was an excellent remedy in these cases, and that it acted much more favorably when combined with proper support to the spine. He was accustomed to push the drug up to the point of tolerance. In a great many instances he also employed the Paquelin cautery. If one could secure rest in bed with traction on the head, he was convinced that recovery would be more rapid. He was still opposed to the use of electricity. The consensus of opinion seemed to be against the use of the term "compression myelitis," and in favor of the term "pressure paralysis."

Dr. Gibney said that he had been able to secure *final* results in 74 cases—33 males and 41 females. The disease was located in the cervical region in 5, in the upper dorsal in 38, in the mid-dorsal in 14, in the dorsal in 19, and in the lower dorsal in 8. There was no case in the lumbar region. Twenty-five of the 74 presented a small deformity, and 49 a prominent deformity. Four patients were over twenty-one years of age, 6 between twelve and fourteen, 9 between eight and twelve, 24 between four and eight, and 3 were under four years of age. The paralysis was recognized simultaneously with the deformity in 14; in 7 cases it was noted within three months, in 15 after six months, in 18 after twelve months, in 9 after two years, in 8 five years afterward, in 3 seven years afterward, and in 1 fourteen years after the deformity had appeared. The treatment consisted during the earlier years in the use of the Knight spinal brace, and, since 1879, chiefly in the application of a plaster of Paris cast with a snugly fitting jacket and a head-spring. In many cases of severe paralysis the wire cuirass or the Cabot frame was employed. Where there was much uncontrollable spasm, he had employed traction.

Forty-three of the cases were cured of the paraplegia, and the subsequent history showed that they remained cured. Eleven were improved at the time of leaving the hospital, and there was reason to believe that many of these were subsequently cured. Eight cases were unimproved and 13 died. Of the fatal cases, 4 seemed to die of myelitis. The longest duration of the paralysis was seven years, and recovery then followed. The shortest period was two months. Ten were paralyzed from four to six months. The average duration was about thirty-two months. Dr. Gibney said that in his former paper 58 cases had been reported. The total number reported by him was, therefore, 132.

Enteric Fever without Intestinal Ulceration.

At a recent meeting of the London Clinical Society, Dr. E. W. Goodall read notes of two cases of Enteric Fever, in which a necropsy showed absence of the usual intestinal lesions. The first case was that of a boy thirteen years of age, admitted into the Eastern Fever Hospital in July, 1894. He died twenty-one days after admission, on the thirty-fourth day of the disease. The chief symptoms were continued pyrexia, a soft and frequent pulse, moderate diarrhœa and abdominal distension, bronchitis, restlessness and delirium, and towards the end muscular tremor, prostration, and coma. Spots were not observed till late in the disease. Post mortem there was slight erosion of the Peyer's patches, which were slate-coloured, but no definite ulceration. The spleen was not enlarged; one parotid gland was suppurating. The second case occurred in 1888, and the account is taken from the hospital records. The patient,

a man thirty years of age, died four days after admission on the fifteenth day of his illness. During life there had been numerous rose spots, continuous pyrexia, delirium, and finally coma. At the necropsy the Peyer's patches were much swollen, but not ulcerated. The spleen was enlarged and pulpy. Fagge, Goodhart, Moore, Chantemesse, and Sidney Phillips have related instances of a similar nature.

National Confederation of State Medical and Examining and Licensing Boards.

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Preliminary Announcement of the Seventh Annual Meeting.

OFFICE OF THE PRESIDENT,
284 Franklin St., Buffalo, N. Y.,
March 15th, 1897.

Dear Doctor:

The seventh annual meeting of this Confederation will be held in the small banquet hall of the Hotel Walton, at Philadelphia, Monday, May 31, 1897, at 10 o'clock, A. M. The following program has been arranged:

I. Address of welcome by A. H. Hulshizer, of Penn. St. Bd. of Med. Exam.

II. Response by Vice-President Reed.

III. Report of the committee on minimum standard of requirements.

IV. Discussion and action thereon.

V. Report of the secretary and treasurer.

VI. Annual address of the President.

VII. Some practical experience with, and results of, the medical law of Pennsylvania—Wm. S. Foster, Pittsburg.

VIII. The need for exact information as to the equipment, methods, and requirements of our medical schools—J. H. McCormack, Bowling Green, Ky.

IX. Address of Prof. J. W. Holland, M. D., Dean Jefferson Medical College, Philadelphia.

X. Paper.

XI. Miscellaneous business.

XII. Election of officers.

XIII. Adjournment.

The object of the confederation is to consider questions pertaining to State control in medicine, and to compare methods in vogue in the several States; the collection and dissemination of information relating to medical education, and to consider propositions that have for their purpose advancement of the standards in the United States. A cordial invitation is extended to all members and ex-members of State medical examining boards, and to physicians, sanitarians and educators who are friendly to the objects named, to attend the meeting and participate in its proceedings.

By order of the Executive Council.

WILLIAM WARREN POTTER, Prest.
A. WALTER SUITER, Sec'y.

Thoracic Diagnosis by Means of the Roentgen Rays.

Professor Benedikt has published an account of the observations made by him with the Roentgen rays on a man who suffered from dyspnœa, and who said that two years ago he had an attack of pneumonia and hemorrhage from the lungs. On the right side in front there was dulness over the apex and bronchial respiration, and there was also dulness of the left back. By means of the Roentgen rays shadows of the heart and the diaphragm were obtained which showed no change in the position of these organs during expiration and inspiration, so that there evidently was an adhesion between the costal pleura and the diaphragm. There was condensation of the lung tissue and the shadows cast by the lungs were studded with black patches; moreover, an abnormal shadow extending to the axilla corresponded to a situation where there was dulness without any other symptoms, so that no doubt the pleura was thickened and the pneumonia spoken of by the patient had really been pleurisy. The dyspnœa was due to the interference with the action of the diaphragm and to the diminution of the respiratory surface.

Diphtheria Bacilli Without Diphtheria

E. Müller has made cultures from the hroats of all children who entered the children's division of the Charité in Berlin, with reference to the occurrence of diphtheria bacilli.

Among 92 children examined, 20 were found in whose throats diphtheria bacilli could be demonstrated, although no inflammation of the parts was present. In six of these children the bacilli were present on the day of their entrance, while the remaining 14 became infected during their stay in the hospital. In one of the cases full virulent bacilli could be demonstrated during two months and a half, without any symptoms referable to their presence. In this connection, however, it should be stated, that all of the children were treated with prophylactic antitoxin injections.

On the ground of the frequency of the occurrence of infection with the diphtheria bacillus without symptoms, as shown by this investigation, the author explains the frequency of the occurrence of endemic diphtheria cases which had been observed in the children's division of the hospital. The absence of symptoms in these cases he explains upon the hypothesis that a personal immunity exists.

The virulence of twelve of the cultures was tested upon guinea pigs. Six of them showed themselves characteristically virulent, while in the remaining six a lack of virulence was shown, only local reaction at the point of inoculation and, in some instances, emaciation being observed.

Pelvic Inflammation.

The treatment of pelvic inflammation advised by W. Duncan is as follows: If, a day or two after delivery, the temperature rises above 100° F. and the lochia are at all offensive, an intrauterine douche of a 1:5000 bichloride is given night and morning; and if after two or three such douches the temperature does not fall and the lochia become odorless, he curettes the uterus, gives another douche, and passes a twenty-grain iodoform suppository into the uterine cavity. Pelvic inflammation occurring apart from labor or abortion is usually of gonorrheal origin and preceded by endometritis. If only the latter is present Duncan curettes the uterus, swabs it with iodized phenol, packs the uterus and vagina with iodoform gauze, and after two days irrigates the vagina with 1:3000 bichloride and places a pencil of iodoform in the uterine cavity, and packs the uterus as before. The vaginal douche is continued for two weeks, and iodoform pencils inserted into the vagina. If acute pelvic peritonitis is present a saline purge should be given, and large hot vaginal douches three times a day. Hot abdominal fomentations are soothing and do no harm. If the appendages are matted together by an old peritonitis the patient should be curetted and have absolute rest in bed for two or three months, with ichthyol wool tampons to prevent coitus and reduce pelvic engorgement. If this fails the diseased parts should be removed.

Antagonism Between Morphine and Cocaine.

Dr. Strickler in the Medical Record discusses the question of antagonism between the physiological effects of morphine and cocaine. His attention was called some time since to an apparent antidotal effect of opium in case of cocaine poisoning. The patient had taken two ounces of a four per cent. solution of cocaine in about two hours. Being unable to sleep and being very nervous after this large dose, he took about half an ounce of laudanum, which in the course of an hour relieved the nervousness and induced sleep. Except for some mental hebetude and a sense of muscular prostration, the patient was in fair condition all the next day—well enough to attend to his business. The author, believing this result could be explained only by the antidotal effect of the laudanum, instituted a number of experiments on animals and a few on man, the details of which are given in his paper; and the results confirmed his supposition as to the antagonism of the two agents. Dr. H. E. Matthews, who had assisted in the laboratory work, was called to a case of opium poisoning, in which he made a trial of cocaine as an antidote. A woman drank over two ounces of laudanum and was seen twenty minutes later, being then in a state of great excitement. Six grains of yellow

sulphide of mercury were given, which caused vomiting of a clear fluid, which had neither the color nor odor of laudanum, so it was concluded that the poison had all been absorbed. The Doctor then administered hypodermically one-half grain of cocaine (presumably one of its salts). The patient became more quiet and vigorous, and subsequently a quarter grain more was given. In an hour her condition was normal. Dr. Stickler concludes his paper as follows: "In any case of opium poisoning I would first employ an emetic; then I would give hypodermically one-fourth to one-half grain of cocaine; wait twenty minutes and if no decided effect had been obtained I would give another injection of one-fourth grain; after waiting twenty minutes I would repeat the dose if there was no manifest improvement in the case. I think three separate doses of one-quarter grain each, at intervals of twenty minutes, is the best plan to follow, on account of the very quick diffusibility of the drug and its sustained effect. During this time I would administer coffee by mouth or rectum as a supplementary heart stimulant, and in extreme cases employ artificial respiration. While I urge this method, I hope with becoming deference to the opinions of others concerning other plans of treatment, I urge it with the honest conviction that it is an improvement upon the atropine and permanganate of potash methods."

Acne.†

Hallopeau in a clinical lecture upon acne, draws nttention to the various functions of the sebaceous glands. In the first place they are the seat of an unceasing formation of new epithelium, for it has been shown that their orifices and those of the sweat glands are the principal focus of epidermic production. The change in the quantity of this production is, doubtless, the cause of the phenomena of acne cornea; they also form an excretory apparatus for fatty substances ingested, or formed in the organism; thus excessive production, or change in these substances, becomes a cause of changes in the glands; they also eliminate substances abnormally introduced into or produced in the organism, which explains the cause of various medicinal (iodine, bromine) and of the so-called ptomainic forms of acne. Importance is also attached to the influence of over-feeding, more particularly over-indulgence in starchy and fatty food and in alcohol. He gives a long description of acne ulgaris, and then points out the differences between this and the other forms. With regard to treatment, the most important applications are sulphur, ichthyol, naphthol, thiol, carbolic and salicylic acids, and mercurial preparations. The amount of such active principles in an ointment must be regulated according to the reaction of the individual, since in some they cause severe inflammation of the integument. A steam spray application of sulphurous mineral waters has frequently proved efficacious,

†Abstract from The Hospital.

Exploratory Incision in the Treatment of Closed Fractures and Dislocations.†

The author has contended for nearly twelve years, that under certain circumstances the surgeon should not hesitate to convert a recently closed fracture into an open one. Of late he has come to believe that the principle should be extended also to closed dislocations. Other surgeons have reached the same conclusions, but the profession in general does not practice in accordance with these views.

The cases to which such operative treatment is to be applied are relative few but form a sufficiently large class to render discussion justifiable.

The advantages accruing in fractures are, exact knowledge of the bony lesion; perfect adjustment of the fragments; release of entangled muscles, vessels of nerves; relief of pain, avoidance of ankylosis and fat embolism; and quick recovery of function without impairment of the normal mechanical construction.

In dislocations the method is desirable because it prevents the occurrence, during attempts at reduction, of fracture of bone and lacerations of vessels and nerves; and permits division of tissues interfering with reduction.

†Roberts—Second Pan-American Medical Congress.

In neither fracture nor dislocation should the open method be adopted until the insufficiency of subcutaneous methods has been proved; but these should not be persevered in for too long a time or applied with other than moderate force.

We quote from The American Year-Book of Medicine and Surgery, Gould—1897—Department of general surgery by W. W. Keen, M. D., and John Chalmers Da Costa, M. D., of Philadelphia, the following:

"Trial has been made of Eucaine in the out-patient surgical department of Jefferson Hospital, and the results have been most satisfactory. In the removal of ingrown toe nails we have a procedure which brings a local anesthetic to the test, and in these usually painful operations Eucaine has proved more satisfactory than cocaine, the anesthesia from Eucaine being more profound and prolonged and widespread than is that from cocaine. (See Dr. Geo. W. Spencer's report in the University Medical Magazine, Nov. 1896).

George W. Spencer, M. D., Demonstrator of Surgery, Jefferson Medical College, Philadelphia in his second article on Eucaine, entitled, "Further Investigations of Eucaine Hydrochlorate as a Local Anesthetic" published in The Medical and Surgical Reporter, November 28th, '86, makes the following statement:

"All who have tried Eucaine and all who have seen its æsthetic effect agree with the following statement which we made in the former article, 'Uucaine is a valuable addition to our resources. It is rapid in action, safe, produces positive and prolonged anesthesia, causes no serious after-effects, and can be rendered aseptic by boiling. It is the best local anesthetic before the profession.'

"An analysis of the twenty-four cases mentioned will probably convinced the reader that in Eucain we have an agent which is safe and reliable."

Nestor Tirard, M. D., London, F. R. C. P., Professor of Materia Medica and Therapeutics, King's College, London, Physician to King's College Hospital, and to the Evelina Hospital for Sick Children in his "Summary of the Therapeutics of the Year 1895-97," says on page 445 of the "Year Book of Treatment" 1897, published by Messrs. Lea Bros., & Co., 708 Sansom St., Philadelphia, as follows:

"The new remedies which claim attention are not so numerous as usual, and with the exception, perhaps, of Eucaine, it cannot be said that they present any striking characteristics."

Tetany.

Lathrop, in the Boston Medical Journal, says that the salient points in tetany are:

1. Recurrent attacks of tonic spasm of certain symmetrical groups of muscles, preceded and accompanied by certain sensory disturbances. Typical position of hand in *main d'accoucheur*.

2. Increased mechanical excitability of the motor nerves, particularly the facial. (Chvostek's phenomenon.)

3. The possibility of inducing the spasm in the arms by nerve pressure. (Trousseau's phenomenon.)

4. Increased excitability of the nerves.

5. Sudden cessation of all these symptoms.

The direct causes are unknown. The predisposing causes are as follows:

1. Idiopathic; sometimes in epidemics, as in Prague, Vienna, or Paris.

2. Chronic gastro-intestinal disorders.

3. All acute infectious diseases.

4. Chloroform inhalations; use of alcohol or ergot; uricacidemia.

5. Pregnancy.

6. Total thyroidectomy.

7. (Omitted by the writer—Rachitis.)

Pathological anatomy. The symptoms are best explained on the basis of central origin, namely, in the anterior cornua of the medulla oblongata and the cord. No known lesion has yet been discovered in these places.

The prognosis is excellent in the endemic type. In the cases following thyroidectomy, it is serious. Out of twenty-eight gastric cases, eighteen died.

Prize Offer.

The Resinol Chemical Co., Baltimore, M. D., are offering six very handsome prizes for clinical reports on their preparation Unguentuc Resinol in the various skin diseases. The preparation is an

effective remedy, and the Resinol Company hope to encourage physicians who have used the preparation by offering the prizes heretofore mentioned. The prizes offered are as follows: First prize, $100, for the best report of not less than five cases; second prize, $60, for the next best report of not less than five cases; third prize, $75, for the best report of not less than three cases; fourth prize, $40, for the second best report of not less than three cases; fifth prize, $50, for the best report of a single case in which Resinol was used; Sixth prize, $25, for the second best report of a single case in which Resinol was used. All articles must be received by the Resinol Company by May 15th. The offers are made to all practicing physicians. The advertisement of the company can be seen in another part of this issue.

Picric Acid in the Treatment of Superficial Burns and Scalds.

Dr. Power in the British Medical Journal, says: The treatment of superficial burns and scalds has long seemed to be most unsatisfactory, for these injuries are attended with an unnecessary amount of inflammation, while the act of renewing the dressings is unduly painful. From time to time I have tried various methods of treatment, and I have come to the conlusio n that the picric acid treatment is by far the simplest and most satisfactory The method is well known in France, where it has been extensively used by Professor Thiery, while Dr. Filleul and Dr. Papazoglou have done their best to disseminate a knowledge of its value. I do not therefore claim the least merit for myself, but I find that so few practitioners know of it that it is perhaps worth while to draw attention to it in England.

The solution of picric acid is made by dissolving a dram and a half picric acid in three ounces of alcohol, which is then diluted with two pints of distilled water; or, more accurately, Picric acid, 5 g.; alcohol, 80 g.—dissolve; add 1,000 g. of distilled water. This is a saturated solution of picric acid.

The clothing over the injured part should be gently removed, and the burnt or scalded portion should be cleaned as thoroughly as possible with a piece of absorbent cotton wool soaked in the solution. Blisters should be pricked and the serum should be allowed to escape, care being taken not to destroy the epithelial susfaces. Strips of sterilized gauze are then soaked in the solution of picric acid, and are so applied as to cover the whole of the injured surface. A thin layer of absorbent cotton wool is put over the gauze, and the dretsing is kept in place by a light linen bandage. The moist dressing soon dries, and it may be left in place for three or four days. It must then be changed, the gauze being thoroughly well moistened with the picric acid solution, for it adheres very closely to the skin. The second dressing is applied in exactly the same manner as the first, and tt may be left on for a week.

The great advantages of this method of treatment are: First, that the picric acid seems to deaden the sense of pain, and, secondly, that it limits the tendency to suppuration, for it coagulates the albuminous exudations, and healing takes place under a scab consisting of epithelial cells hardened by picric acid. A smooth and supple cicatrix remains, which is as much superior to the ordinary scar from a burn as our present surgical scar is superior to that obtained by our predecessors, who allowed their wounds to granulate.

I have used this method for more than a year in a hospital practice, both among out-patients and in-patients, and I have every reason to be thoroughly satisfied with the results I have obtained. It is not an ideal method, for it stains the cloths and discolors the hands of the surgeon, but it is a great improvement upon anything else I know of.

Diabetes with Painful Micturition.

It is with the greatest pleasure that I report the good results from the use of Sanmetto upon myself. I have been a sufferer for five months from diabetes, with great pain just before passing water. From the use of two and one half bottles of Sametto, the pain was removed and the inflammation checked. I have prescribed Sanmetto several times since, and shall continue to do so.

J. N. Storey, M. D.

Hill, N. H.

Doctor's Bills Must be Paid.

According to the Medical News, the New York legislature has under consideration a bill providing for the payment of debts, as follows:

Every executor and administrator must proceed with diligence to pay the debts of the deceased according to the following order: (1) Debts entitled to a preference under the laws of the United States. (2) Taxes assessed on the property of the deceased previous to his death. (3) Debts of the deceased, because of services rendered and materials furnished by physicians, pharmacists, nurses, and undertakers. (4) Judgements docketed, and decrees entered against the deceased according to the priority thereof respectively. (5) All recognizances, bonds, sealed instruments, notes, bills, and unliquidated demands and accounts. Preference shall not be given in the payment of a debt over other of the same class, except those specified in the fourth class. All debts specified in the third class shall become due upon the death of the deceased and shall be paid within ninety days thereafter.

Nervous Sypmptoms in Rickets,

Dr. A. Jacobi lays great stress upon how important it is that the earliest signs of rickets should be recognized, and the disease at once treated. Amongst these he lays stress on sweating at night, especially that about the head which leads to restlessness and rubbing of the head on the pillow until the occipital region becomes entirely denuded of hair. Hydrocephalus is common, and the prognosis is better in rickets than in other affections. Laryngismus stridulus is in the great majority of cases dependent on cranial rachitis. With this is frequently combined a tendency to attacks of tetany —also a symptom or associate of rickets. He discusses the facial symptom of tetany— the socalled Chvostek's sign—which is the production of a spasm of the upper eyelid and ala nasi by pressing on or tapping the skin over the zygomatic arch. He has found this condition present in many cases of tetany, but it is not absolutely diagnostic, as it may in some cases be absent, and it also occurs in connection with other affections, for example, in epilepsy, chlorosis, and neurathenia.

Puerperal Sepsis.

Saft. At the institution for the instruction of midwives in Breslau the prophylaxis consists in the thorough disinfection of the hands and instruments; the vagina, however, is let alone, so as not to interfere with the bactericidal power of the vaginal secretion. Among 879 confinements one death occurred from sepsis. The high mortality (21.4 per cent) is explained by the careful observation of the temperature; every case in which the rectal temperature was above 38° C. was classed as abnormal. The best results were obtained in those cases in which only abdominal palpation was employed; instrumental deliveries showed the highest mortality. In opposition to Leopold, Saft writes against the disinfection or cauterization of infected areas; intrauterine irrigation is condemned in vigorous terms; sustaining treatment is advised.

Anti-Diphtheritic Serum as a Prophylactic.

A certain educational institution recently requested an opinion from the Academy on the desirability or otherwise of inoculating every pupil in the institution with anti-diphtheritic serum as a prophylactic measure, diphtheria having already made its appearance among the pupils. The matter was submitted to the *Conferentzia* of the Academy (or committee of professors), and their reply was recently published. It is to the effect that such prophylactic injections would, in their opinion, be useless. This *ex-cathedra* statement seems worthy of record.— *British Medical Journal.*

Sanmetto in Bright's Disease.

I have been using Sanmetto in my practice for two years or more, and am nearly always well pleased with its effects. Have had splendid success with it in Bright's disease, sometimes using it alone and at other times in connection with digitalis. H. Green, M. D.

Shell, Ala.

A Case of Placenta Prævia.

The Medical Sentinel of Portland, Oregan, publishes an article in its February number entitled "A Case of Placenta Prævia" by Dr. Carrie E. Leiberg of Hope, Idaho, which from its rarity is of interest to the profession. The Doctor writes; "On the night of Dec. 26th, I was called in consultation with Dr. Loop of this place. Found the patient, a II para, 31 years old, at the end of her third pregnancy.

A sudden and terrific uterine hemorrhage had, within a period of five minutes, changed the patient from a state of comparative health which had existed during her pregnancy, to one of profound collapse.

We found her clothing and bedding saturated with blood, and large pools on the floor. Her face, lips and tongue deathly white, pupils widely dilated, extremities cold, pulseless, and covered with clamy perspiration. Heart beating at the rate of 130 per minute. She was vomiting, and almost comatose.

An examination revealed a soft, boggy indistinct mass occupying the cavity of the pelvis. Through the rigid os, which was dilated to the size of half a dollar, could be felt the peculiar lobulated uterine surface of the placenta, which was firmly adherent entirely around it. No presention pnrtion of the fœtus could be determined per vaginum.

External manipulation showed a large child in a transverse position.

As there was no further hemorrhage, and the woman not in a condition to bear the shock of an attempt at version or a forced termination of the labor, no efforts were made in that direction. Hypodermics of brandy, and of strychnia were given, with marked beneficial effect. A few hours later, we began a systematic building up process, relying solely on Horlick's Malted Milk, a tablespoonful of which was given in hot water, every hour.

The result was all we could desire, and improvement was rapid. In 16 hours the radial pulse could be felt, and progressively became slower, and stronger. There were absolutely no uterine contractions.

On the morning of the 30th another sudden and profusd hemorrhage began, again without a pain. As we had remained constantly in attendance, expecting precisely such an occurrence, we were prepared to meet it, and controlled it promptly and effectually, before any serious loss had takes place, by tightly packing the vagina with a tampon, which was changed every six hours.

On the morning of the 31st we deemed her in as good condition for her labor as she would be likely to be. Pulse 90 weak, but regular. Temperature normal. No unpleasant symptoms except a severe anæmic headache. We began at 7 A. M. by giving her small doses of ergot, 5 or 6 drops of the Fluid Extract, every twenty minutes.

Attempted to change position of the child by external manipulation, which, after some little difficulty we succeeded in doing. At 1 P. M. uterine contractions began, and at 2:30 were moderately strong, though irregular. At 4 P. M. we considered that the presenting part of the fœtus was wedged down against the placenta with sufficient force to control the hemorrhage and removed the tampon.

We could now feel the os completely dilated, and vertex well down into the pelvic brim though the placenta could still be distinguished as covering it, but felt much thinner.

At 5 the child was born, a male weighing 10 or 11 pounds. It was cyenotic and apparently lifeless, but continuous efforts resuscitated it for a short time, its death occurring about three hours later. It was what is commonly known as a "blue baby" and undoubtedly would not have lived in any case.

After the birth of the child there were no uterine contractions whatever.

The patient laid on the bed, deathly white, yawning incessently,and complaining of great thirst, nausia and faintness A chain of symptoms well calculated to cause an accoucheur great anxiety. Thirty minutes after the birth of the child I passed my hand into the uterus, and found that it passed directly through the placenta which was firmly attached entirely around the os, aud throughout its entire extent.

Pulsation could be distinctly felt in the placental vessels on the fœtal side, though

it had ceased in the cord a few minutes after the expulsion of the child.

There was no hemorrhage or clots in the vagina or cavity of the uterus, notwithstanding the fact that the above symptoms are laid down as cardinal and infallible signs of such a condition.

I began by cautiously separating the placenta from the uterine wall, beginning at the margin and separating a small portion at a time, firmly pressing my fingers against the denuded uterine tissue to prevent as much loss of blood as possible.

Preparations had been made for transfusion as we expected a profuse hemorrhage would follow the removal of the placenta. In this we were fortunately mistaken. In about 20 minutes the separation was completed and placenta withdrawn, with comparatively little loss of blood. It was considerably larger than normal and very friable. The opening through which the child had passed was torn directly through its substance, between the margin and the inplantation of the cord.

Patient soon rallied, and we began to feel that the worst was over, especially as the uterus began to contract firmly.

Two hours later she was suddenly seized with alarming symptoms of heart failure. Extremities cold, pulseless, clamy, pupils widely dilated, respiration rapid and shallow and irregular, heart beating 170 per minute, entermitting every 12th or 13th beat. Profound collapse.

We elevated foot of bed two feet. Applied dry heat to entire surface of body, gave hydodermics of strychnia and of nitro-glycerine and in the course of an hour had the satisfaction of seeing the more alarming symptoms pass away. Four hours after she had another attack similar to the above, but of shorter duration. The dawn of the new year found her just alive, that was all. Then began a systematic course of building up, and I believe that had it not been for Horlick's Malted Milk, regularly and continuously given, our patient would have died of exhaustion. Too much cannot be said in praise of this most excellent food. It was readily and easily assimilated, and the patient went on to a rapid and complete convalescence.

The Common Communion Cup.

The rector of the Church of the Advent, East Oakland, California, has asked the Board of Health to take such steps as will do away with the common communion cup now used in the celebration of the sacrament. He thinks it is dangerous, and the more since California is a sort of "Mecca" to which phthisical pilgrims from every part of the United States come. "As a result there is a greater percentage of so called consumptives in the population of California than anywhere else except Colorado. As consumption is now definitely known to be a contagious disease, and as all Christians attend to their religious duties more faithfully when ill than at other times, it follows that there is a particular need of safeguards in this State about the common cup in the communion service. May your petitioner presume to ask which member of your board would be willing to sip from a cup from which fifty strange persons had drunk, some of whom were known to be affected with phthisis pulmonalis?"

† Tenderness of the Sternum as a Symptom of Tertiary Syphilis.

Amongst the many good stories which the late Sir William Savory could relate of his examination experiences was one of a stalwart candidate who was asked whether he thought that the patient whose malady he had to diagnose had ever had syphilis. He at once struck the poor fellow a blow on his mid chest which sent him against the wall. "What did you do that for?" demanded the examiner. "Oh, you see, sir, if he had had syphilis he couldn't have stood that; they're always tender on the sternum." Although the mode of investigating the symptom was a little excessive in vigor, yet a knowledge of the symptom itself may be held to illustrate a certain kind of practical familiarity with the means of diagnosis in such cases. It is a fact that many patients in the tertiary of syphilis and suffering from other phenomena of it do have some periosteal tenderness on the sternum. Not only is periostitis of this bone very frequent, but it is often very insidious, and by no means attended by the severe pain.

† Abstract from the Archives of Surgery.

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Not only palatable, but very easily assimilated.—*The Trained Nurse, New York.*

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Highly recommended and endorsed by the best medical authorities in this country.—*North American Practitioner, Chicago, Ills.*

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The results attending its use have been very satisfactory.— * * * *M.D., in New York State Medical Reporter.*

Especially valuable in fevers, and often the only food the stomach will tolerate in many gastric and enteric diseases.—*Dominion Medical Monthly, Toronto.*

IMPERIAL GRANUM has stood the test of many years, while many competing foods have come and gone, and have been missed by few or none. But it will have satisfactory results in nutrition far into the future, because it is based on merit and proven success in the past. *The Pharmaceutical Record, N. Y.*

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The Forms of Diabetes.

Dr. George Harley ("Lancet") gives the following classification of diabetes:

1. Hepatic diabetes, including the gouty variety.

2. Cerebral diabetes, including all cases of saccharine urine arising from nerve derangements.

3. Pancreatic diabetes, the most deadly form of the disease.

4. Hereditary diabetes, a form by no means uncommon, and one, too, where both brothers and sisters may labour under the disease without either their maternal or paternal parent having been affected by diabetes, though more distant members of the family may have suffered from it.

5. Food diabetes, including all forms of saccharine urine arising from the ingestion of unwholesome substances.

In the matter of treatment, besides diet and opium or codeine, Dr. Harley recommends croton chloral, strychnine, phosphoric acid for thirst, and an absolute prohibition of alcohol.

Healing of Wounds Among the Negroes of Africa.

A surgeon writes from Cameroon expatiating upon the almost miraculous way in which the wounds of the negroes there heal without complications. He describes a dozen cases of severe wounds, among them five received while out on an expedition, compelled to march through pouring rain with no food but wild bananas, and exposed to the constant fire of the natives at close range, the bullets often nothing but scraps of iron so that the wounds resemble those made by an explosion, and with no surgical attendance for twenty-one days, as it was not a military expedition. The recoveries were rapid and complete with no complications; in some cases a surprising lack of sensitiveness in the parts wounded. He is inclined to ascribe this extreme power of reaction to a race peculiarity, as the absence of wound-infecting bacteria in the primæval wilds is not absolutely established, although they must certainly be rare. In fifteen months of residence there he has never heard of such a thing as puerperal fever, and only had one phlegmon in 906 patients treated. He remarks in conclusion that the surgeon in West Africa is certainly justified in proceeding with the utmost audacity in the conservative taeatment of his black patients.

Mistaken Opinions as to the Use of Mercury.

Mr. Carmichael writes respecting mercury: "But whatever be the quantity, it is necessary for the cure of syphilis, to excite a strong mercurial action and to make the constitution feel and suffer under the debilitating effects of the mineral. Alterative courses, as they are termed, may suspend, but will seldom supersede the poison altogether."

This probably well expresses the creed of our forefathers. I think we may now assert that it has been proved that small doses, frequently given and long continued, may, without in any way disturbing the patient's health, entirely suppress syphilis. It was the erroneous views illustrated in the above quotation which led to such discordant opinions as to the value of the drug.

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Poison Cheese.

Dr. Vaughn has found that cheese sometimes contain a poisonous fermentation products, which is capable of producing serious, or even fatal, results. He has isolated a substance, which he has named "tyrotoxicon." It is apparently more likely to occur in the soft cheeses prepared in small families, but is by no means confined to these. It not infrequently occurs in the products of large manufactories, both in the States and in Europe. The symptoms produced by "sick" cheeses, as the poisonous ones are called, are dryness of the mouth and fauces, a sense of constriction in the throat, nausea, vomiting, diarrhœa, and great nervous prostration. These symptoms usually wear away after a few hours but, in rare instances, death results from collapse. Unfortunately, "sick" cheese cannot be detected by any peculiarities of taste, smell, or appearance, and the only certain means of ascertaining its character is by chemical examination. Dr. Vaughan regards the litmus paper test as the readiest and most practical means.

This depends upon the fact that cheese containing the poison is always strongly acid, while good cheese, although always somewhat acid to test paper, is less decidedly so, and does not so quickly and deeply redden litmus paper. It is not alleged that the test is entirely free from error, but only that it affords the most reliable ready means of guarding against accident from this source; and grocers should apply the test to all cheese which they purchase. The poisonous principle was found to exist in quite different productions in different samples of infected cheese. From some, three times the amount was obtained as from an equal weight of other samples. Tyrontoxicon, when isolated, is in the form of longed needled shaped crystals, which are freely soluble in water, chloroform, alcohol, and ether. A minute crystal placed on the end of the tongue causes a sharp stinging sensation at the point of application, and this is presently succeeded by dryness and a sense of constriction in the throat. A slightly larger amount produces the other symptoms characteristic of poisoning by poisonous cheese.

Hemiplegia After Syphilis.

The Archives of Surgery describes the case of a gentleman aged 30, of abstemious habits, but who had had syphilis three years before, dined out on Christmas Eve. His friends thought his mode of speech rather peculiar. Next morning it was quite certain that he mumbled. He now stated that for a week or two past he had been suffering from headache. The next morning he did not come down to breakfast, and his door being opened, he was found in bed only partially conscious, and quite unable to speak. A broken chamber utensil lay on the floor. During the next few days he was aphasic and hemiplegic in his right limbs, side of face and tongue; but he never lost control of his sphincters, and always insisted, although he could not stand, upon being assisted out of bed to make water. At present, six weeks after the attack, the limbs have quite recovered, and he can walk well, but he can speak only in monosyllables.

Traumatic Neurasthenia.

On February 22, 1897, Dr. Horsley read a paper with this title before the London Medical Society. He grouped the cases under four heads, according as there was or was not a distinct external injury, and according as the symptoms occurred at once after the receipt of the injury or at some undefined period thereafter. He pointed out that there was no essential difference between cases of traumatic neurasthenia and ordinary neurasthenia from worry or overwork. He referred to the hyperpyrexia which was sometimes met with in acute cases. In respect of the symptoms he insisted on the inability to concentrate the attention on any particular subject, on the disturbance of sleep, specially noticeable in the form of early waking, and the occurrence of nightmares or somnambulism. There was sometimes general paresis, with localised paralyses, spasms, and twitchings. The local paralysis usually took the form of hemiplegia of one—usually the left lower—limb. The changes affected the voluntary muscles rather than the so called organic muscles, though these were sometimes affected. He particularly mentioned the fact that the tongue in these cases was often deviated to the opposite—the paralysed—side, being heaped up in an arched form on the normal side, and twisted on its longitudinal axis. Smell and taste were rarely involved in functional nervous disturbance, but sight was often affected, commencing with asthenopia. One also met with one-sided deafness, usually on the left, with tinnitus. Various subjective sensations of touch were complained of; paræsthesia, rarely analgesia, pins and needles, and a sensation of weight in the limbs, with or without loss of the muscular sense. The superficial reflexes were at first exaggerated and then abolished. The deep reflexes were almost always affected, and ultimately disappeared, and there was usually ankle clonus. The painful manifestations were usually distinctly localised, especially in certain spots—as, for instance, over the bregma, over the areas served by the posterior branch of the second cervical and the sixth dorsal nerve, the dersolumbar junction, etc. Patients often complained of palpitation, specially troublesome at night. The quantity of urine was usually greatly increased and the percentage of solids diminished. He expressed the view that all the symptoms were explicable on the assumption of a disturbance of the functions of the central nervous system, and his experience had led him to believe that none of them with severe symptoms could be expected to recover until they had undergone a course of the Weir Mitchell treatment. Most of the cases usually recovered, but they remained very liable to relapses even after long intervals of apparent recovery.

The Therapeutic Properties of Buttermilk.

Buttermilk, so generally regarded as a waste product, has latterly been coming somewhat into vogue not only as a nutrient, but as a therapeutic agent, and in an editorial article the "Canada Lancet," some time ago, highly extolled its virtues. Buttermilk may be roughly described as milk which has lost most of its fat and a small percentage of its caseine, and which has become sour by fermentation. Long experience has demonstrated it to be an agent of superior digestibility. It is, indeed, a true milk peptone—that is, milk already partially digested, the coagulation of the coagulable portion being loose and flaky, and not of that firm, indigestible nature which is the result of the action of the gastric juice upon sweet cow's milk. It resembles koumiss in its nature, and, with the exception of that article, it is the most grateful, refreshing, and digestible of the products of milk. It is a decided laxative to the bowels, a fact which must be borne in mind in the treatment of typhoid fever, and which may be turned to advantage in the treatment of habitual constipation. It is a diuretic, and may be prescribed with advantage in some kidney troubles. Owing to its acidity, combined with its laxative properties, it is believed to exercise a general impression on the liver. It is well adapted to many cases where it is customary to recommend lime-water and milk. It is invaluable in the treatment of diabetes, either exclusively or alternating with skimmed milk. In some cases of gastric ulcer, and cancer of the stomach, it is the only food that can be retained.

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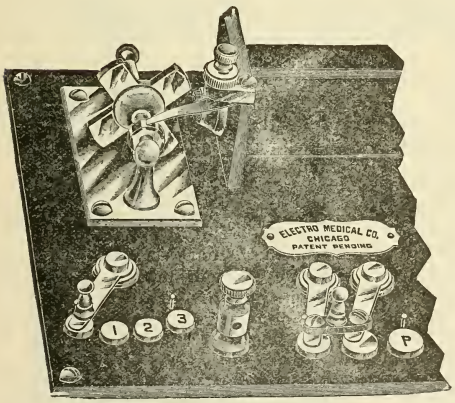

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Medication in the Gouty and Rheumatic Diatheses.

While there can be no doubt of the value of colchicum and the salicylates, the depressant action of colchicum preparations and the uncertainity of their action has caused them to be regarded with suspicion, especially by the younger generation of physicians.

Where salicylate of soda produces no beneficial result in the rheumatic diathesis, it may be laid down to the origin of the drug and in all cases, I have found that that derived from carbolic acid and CO_2 is vastly inferior to the salicylate existing as salicylate of methyl in the sweet birch. This is the most potent of salicylates (synthetical or organic) and is perfectly safe and free from all objections. An elegant and perfectly safe preparation of the above drugs and one which in my hands has never yet failed me is Colchi-Sal (colchicein methyl salicylate). This drug is dispensed in capsules of 29 centigrammes and each contains exactly ¼ milligramme of the active principles of colchicum. The following cases illustrate what results follow its administration: Case I. Mr. F. W., aet. 35 came to me with a history of inflammatory rheumatism of several years duration. He had for four weeks previous to my seeing him, been suffering from a very severe attack which kept him in bed. Salicylate of soda and routine treatment only allowed him to get about on crutches and no further improvement could be obtained. I found the urine very heavy, acid and full of deposit. The previous treatment was stopped and I ordered three capsules of Colchi-Sal every four hours. Within 24 hours there was decided improvement and on the third day, he gave up his crutches and in ten days returned to business. He has since married—and although two years has elapsed, has had no recurrence of the trouble. Cass II. Mr. C. B. Aet. 40, gave a long history of Rheumatic Arthritis and pain in the lumbar region—with contraction of the muscles around the joints. The patient has no syphilitic taint.

The urine was very acid with dense deposit. The pains usually came on after retiring and appeared to be due to the heat of the bedding. Alkaline and lithia treatment gave little or no result. I ordered hot fomentations to be applied to the limbs and back and three capsules of Colchi-Sal at bed time and one every hour during the day. Within 37 hours there was a decided change for the better and I reduced the dose to two every three hours and within ten days, the patient was almost free from pain at night and quite so in the day time. While the final recovery was slow, there has been no relapse since. Case III. Mrs. D. Aet 50. Widow; has been enjoying fairly good health since the menopause which occurred six years previously, except during damp weather, when she complains of pains in the joints and great stiffness which prevents her stooping. On account of some heart trouble, I feared to give the salicylate of soda, and lithia and alkaline waters were of no avail. Colchi-Sal in doses of 20 centi grammes every two hours gave prompt relief and in two days, she was perfectly well again. She has in rainy weather a tendency to the same trouble, but two or three capsules of Colchi-Sal, suffice to ward off an attack.

Amongst a number of other cases, I recall a gouty patient in which Colchi-Sal acted wonderfully at a critical stage of the disease,which consulting physician feared might be fatal and this I take to be due to the elimination of uric acid by the natural methyl salicylate in combination with the active principle of colchicum—which alone has to be used with much caution.

In all my cases, no excessive catharsis or untoward effects were noticeable. The value of Colchi-Sal is not even confined to the human race, for I have tried it on my colley who had lost complete use of its hind limb and which the veterinary thought a hopeless case; a few capsules put him all right in a few days.

It is important that the patient gets Colchi-Sal and not a mixture of colchicine with a mere synthetic methyl salicylate (the artificial preparation costs less than half the natural product) for disappointment and even dangerous symptoms may result from substitution. The genuine preparation moreover can be easily and cheaply dispensed by any pharmacist.

Geo. W. Tobias, M. D.

New York, 20 Feb., 1897.

RESINOL

An absolutely reliable Anti-pruritic, Local Antipyretic, Emollient and Skin Nutrient.

R: Unguentum Resinol.

Resinol, by promptly dissipating capillary hyperæmia, has established itself as the best local application in Erysipelas and other forms of Dermatitis, and as the remedy *par excellence* in all eruptions and irritations of the skin, as *Eczema, Herpes, Acne, Psoriasis, Seborrhœa, Tinea, Capitis, Intertrigo, Sunburn, Eruption of Poison Oak, Burns and Scalds, etc.* Stops the itching of *Pruritus Ani* or *Vulvæ, Itching Piles, Marginal Eczema, etc.*, instantaneously, and immediately subdues the firery inflammation of *Vulvitis; Balnitis, etc.*

Resinol is a harmless antiseptic and a true skin anæsthetic, absolutely non-irritant and non toxic (free from lead, mercury, or cocaine), can be applied to mucous,excoriated or denuded surfaces of any extent at any age without fear of untoward results, and is not contra-indicated by any internal medication that may be deemed advisable.

OPINIONS FROM THE PROFESSION.

From **H. S. CUNNINGHAM, M. D.,** *Prof. of Gynecology and Clin. Dis. of Women. Amer. Med. Col., Indianapolis, Ind.:* "I have been delighted with the action of RESINOL in Pruritus Vulvæ, Tinea Capitis, etc."

From **F. G. WELCH, M. D.,** *New York City:* "For Senile Eczema, especially with Pruritus, RESINOL is the best application I have found in twenty-five years' practice."

From **W. J. BRANDT, M. D.,** *Brooklyn, N. Y.:* "Surely in your preparation, RESINOL, you have a most wonderful antipruritic remedy. I have used it upon myself and my relief has been complete and absolute."

From **E. S. HOYT, M. D.,** *Specialist, Rectal Diseases, New York City:* "RESINOL is one of the best local anti-phlogistic remedies I have ever used. It subdues the intense inflamation in Strangulated Hemorrhoids in a very short time."

From **H. S. DWIGHT, M. D.,** *Philadelphia, Pa.:* "In the various skin affections arising from high temperature in mills where operatives are exposed, I have found RESINOL admirable. I have also used it with good results in Chafing, Scrotal Eczema, and Vulvitis."

From **ISAAC P. ALGER, M. D.,** *Coldwater, Mich.:* "I consider RESINOL a grand thing for cutaneous congestion and inflammation."

From **W. S. ROFE, A. M., M. D.,** *Anita, Iowa:* "As an ideal sedative RESINOL has no equal, and in all eruptions of the skin I shall always use it in preference to anything else."

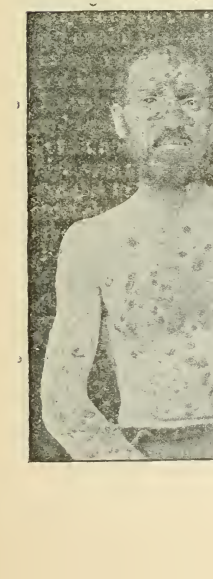
From **ADVIL McLEAN, M. D.** *McCall, S. C.:* "It is decidedly the best anti-pruritic remedy I have ever used."

From **W. A. JEMSON, M. D.,** *Eminence, Ky.:* "RESINOL is the best local application for Eczema I have ever used."

Resinol is put up in *one ounce* jars at 50 cts. each, and can be obtained at any drug store. **Sample** sent **free** on application, or **one** regular size jar for trial on receipt of 25 cents.

RESINOL CHEMICAL CO., Baltimore, Md.

Mistura Quinqui Iodidorum.



(Mist. Quinqui Iodid.)

EACH FLUID DRACHM CONTAINS:

Arsenici Iodidum, ...1-24 grains.
Ferri Iodidum.....1-5 grains.
Hydrargri Iodidum, ...1-24 grains.
Potassii Iodidum,.....2½ grains.
Manganesii Iodidum,.....1-5 grains.

In Secondary and Tertiary Syphilis this preparation is considered by all the leading authorities on the subject to be the best. It should be given in teaspoonful doses, three or four times a day, and continued for several months.

R. H. JORDAN & CO.

CHARLOTTE, N. C.

Eczema.

Dr. Jackson, of Houston, in the Texas Health Journal, draws attention to the numerous causes of eczema, and insists upon the necessity of correctness in locating the origin of the disturbance.

He makes it quite clear that failure must follow a local line of treatment when the disease occurs in a child beset with a ruined stomach, with inflammatory dentition, with entozoa, or with the constitutional predisposition; also, when it is the positive result in adults of constipation, tape worm and indigestion.

In firemen, stokers and moulders of melted metals, and in those who are changing from cold to hot climates suddenly, no relief of any very considerable degree is promised until a different s of circumstances are inaugurated, by wh h a temperature of a cooler equanimity is obtained. When it occurs on the hands of those who daily handle irritating materials, and are forced to be continually bathing in hard water, there are sufficient and rational reasons for instituting local treatment immediately upon interdicting the offensive vocation.

As a constitutional remedy, in puny cases, arsenic in moderate doses, three times a day, is the very best remedy. The bowels should be kept constantly soft, moving preferably twice a day. Porridge, coffee, sweat meats, dried fruits, shell fish, and highly salted meats, are injurious.

The objects proposed in local treatment are, first, cleanliness—*the parts must be clean*—then protected from the air, from filth, from friction of clothing, and from further washing, since such things would surely break down the little delicate cell growths which, under proper culture, will soon cover the raw surface. Tar preparations, in the form of a lotion, or diluted ointment, influence favorably the violent itching varieties. A powder of starch and zinc in the intensely weeping cases will keep the parts both dry and clean, and promote healing. Oleate of zinc is preferable in the dry form, particularly so when occurring in the palms, forming the most difficult variety to cure. In such a case the ointment is ened cuticle is completely macerated and exfoliated by the use of two drachms of liquor potassae to the ounce of water—this to be applied on cotton until the horny skin peels off. The oleate is then coated on, gloves are adjusted and worn night and day until healing takes place.

The eczematous fissures of the alæ nasi, ear, mouth, etc., are to be cleansed frequently with mercuric solution, inasmuch as it is impossible to prevent them from becoming constantly infected, they should be touched twice a week with a ten per cent. solution of nitrate of silver, and protected when possible with a pledget of cotton.

There were many other interesting and important directions, having reference to diet, exercise, air, and surroundings, too numerous to be mentioned in this brief notice.

CHICAGO, Feb. 26th, 1897.

To the Editors of The Charlotte Medical Journal, Charlotte, N. C.:

Permit me to thank you for the very complimentary editorial contained in the current number of your valuable and influential Journal, regarding me and my modest, though laudable ambition to be elected to the Secretaryship of the A. M. A., at the forthcoming meeting to be held in Philadelphia.

If I should be elected (as indeed I expect to be) I promise the Association to fulfill the duties of the position in an as active, trustworthy, faithful and efficient manner as my ability will direct.

With a renewal of my grateful acknowledgment for your courtesy,

I remain, very respectfully, yours,
LISTON H. MONTGOMERY.

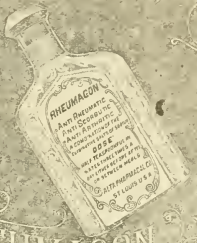
Dr. S. W. Bryan of Layton, Pa., writes us under date of February 4th, 1897.

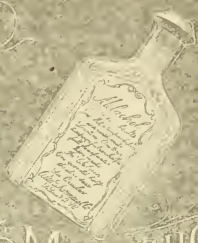
NORWICH PHARMACAL CO.,
Norwich, N. Y.

Dear Sirs:—I received the sample of Unguentine you so kindly sent me sometime ago, for which I wish to thank you. It has remarkable healing powers without any irritation, indeed it can be used on even the tender skin of an infant without harm. I can most cheerfully recommend it as a splendid local dressing and shall continue to use it.

The Trinity of Therapy

ANALGESIC · ABSORBENT · ASSIMILANT





RHEUMAGON

A SPECIFIC FOR ALL RHEUMATIC CONDITIONS AND FIBROUS INFLAMMATIONS LUMBAGO, ARTHRITIS, AND ALLIED DISEASES ANTI SYPHILITIC ANTI SCORBUTIC ANTISEPTIC

POWDER LOCALLY IN LESIONS ULCERS SKIN DISEASES DUST OVER SURFACE IN INFLAMMATIONS USE WARM POULTICES OVER AFFECTED SURFACE

MELACHOL

PROMPT PAINLESS PLEASANT LAXATIVE. STRONG NERVINE. ABSOLUTE ANESTHETIC ANTIDOTE TO MORPHINISM STRONG SUPPORTIVE ELIMINANT.

TABLETS THE MOST POWERFUL DIGESTANT OF ALL THE ELEMENTS ENTERING INTO THE ORGANISM RELIEVES DYSPEPSIA FLATULENCE, BOLIO AND INTESTINAL DISORDERS CONVERTS PROTEIDS INTO BLOOD PLASMA NOURISHES STRUCTURE CELLS AND FUNCTION.

PHASELIN

FORMULAE

RHEUMAGON, A COMBINATION OF THE IODIDES AND PHOSPHATES OF SODIUM.
MELACHOL, A REDUCED CHEMICAL COMBINATION OF PHOSPHATES WITH NITRATES OF SODIUM.
PHASELIN, THE DESSICATION OF PHASEOLUS THE EGYPTIAN AND MEXICAN VARIETY OF THE GENUS PHASELUS

Described by HIPPOCRATES as A DIURETIC A LAXATIVE possessing strong digestive powers a strong supporter of function a positive cure for the gastric catarrh of alcoholism A general healing remedy of all local lesions Ulcers and Eruptions A Specific as a poultice in all ophthalmic inflammations

RHEUMAGON · MELACHOL · PHASELIN

THE THREE MOST VALUABLE CONTRIBUTIONS TO MODERN THERAPY COVERING MOST OF THE PATHOLOGIC CONDITIONS OF THE ORGANISM USED SUCCESSFULLY IN ALL HOSPITALS AND BY CLINICIANS GENERALLY. PHYSICIANS will be furnished full size bottle FREE on payment of Express or Mail charges PLEASE name Journal in which this card appears.

ALTA PHARMACAL CO ST LOUIS, U.S.A.

SEND FOR LITERATURE.

Prognosis of Heart Disease in Children

Chapman, in the London Lancet, says; Difficult as it most generally is to forecast the issue of a case of heart disease, the anxious parent expects to be told when and how far the child may recover, and, if recovery is impossible, the probable duration of life. It behooves us, therefore, to answer these questions as far as possible. A diagnosis having been made of the physical condition of the heart, what are the data on which to form our prognosis? 1. If the cardiac disease was caused by a single attack of rheumatic fever, how long is it since the attack, and what has the health been in the interval? 2. If there have been two or more rheumatic attacks, at what intervals have they occurred? 3. The family history. 4. What is the condition of the patient as regards general nutrition? 5. Is there good compensation, or commencing or even advanced failure! 6. If their is heart failure, is it recent, or only a stage further on the downward course? The condition of the heart, lungs, liver and kidneys will help materially in answering this question. 7. Œdema of the ankles.

Accuracy of diagnosis should always be aimed at, and in many cases repeated examinations are required to attain this object. If a long time—say, five or more years—has elapsed since the heart affection began, we are able to judge how far the heart and circulation have accommodated themselves to the altered condition and from the way the heart has borne the strain to form some idea how it will bear it in the future. Frequent recurrence of rheumatism at short intervals is always a bad sign. The extent of dilatation will be an index of the healthiness or otherwise of the myocardium and the muscular power by the regularity and strength of the heart's action, and its efficiency as a pump may be gauged by the condition of the pulse and other signs. Aortic stenosis of moderate extent is the least serious condition; the amount of hypertrophy of the left ventricle will be a guide to its extent. Aortic regurgitation may be so far compensated for as to render its existence but little bar to the enjoyment of life, although patients so affected cannot expect length of days. Anything which provokes dilatation brings the case a stage nearer the fatal issue, besides which fatal failure of the heart may occur any time.

Improved Technique of Vaginal Ligation of the Uterine Arteries and Indications for Uterine Fibromata.

Dr. Augustin H. Goelet, in a paper presented to the N. Y. State Medical Society (Medical Record) thinks that this operation has not been given the consideration it deserves as a conservative surgical measure, and that it has a distinct place in gynecological surgery.

The purpose of the operation is to produce atrophy of these tumors by cutting off the nutrition afforded by the uterine arteries which furnish the uterus with two thirds of its blood supply.

The indications for the operation are interstitial fibroids which do not reach above the level of the umbilicus and small subperitoneal growths which spring from the wall of the organ below the fundus, and where extensive adhesions have not formed with adjacent structures through which the tumor might receive nourishment.

He thinks that ligation of the vessels *en masse*, including the surrounding tissues at the base of the broad ligament, does not positively assure complete obliteration, that, with the shrinking of the tissues in consequence of the compression, the ligature loosens and the circulation is restored. He, therefore, clamps and ties the vessel, then divides it, tying afterwards the uterine end of the artery, which bleeds also because of its anastamosis with the ovarian. In those cases where this method was adopted the tumor has undergone complete atrophy.

While the operation has a limited application it possesses some advantages which commend it, viz.:

1. It involves little or no risk, when carefully executed.
2. It does not involve a tedious convalescence.
3. It is quickly and easily performed.
4. Its immediate result is to afford prompt relief of the symptoms.
5. Its ultimate result, which is manifest within six months is complete or almost complete atrophy of the tumor.
6. It does not unsex, mutilate or disable the patient.

ALWAYS THE SAME.

A STANDARD OF ANTISEPTIC WORTH.

LISTERINE.

LISTERINE is to make and maintain surgical cleanliness in the antiseptic and prophylactic treatment and care of all parts of the human body.

LISTERINE is of accurately determined and uniform antiseptic power and of positive originality.

LISTERINE is kept in stock by all worthy pharmacists everywhere

LISTERINE is taken as the standard of antiseptic preparations: The imitators all say, "It is something like Listerine."

:o:

LAMBERT'S

LITHIATED HYDRANGEA.

A valuable Renal Alterative and Anti-Lithic agent of marked service in the treatment of Cystitis, Gout, Rheumatism, and diseases of the Uric Diathesis generally.

DESCRIPTIVE LITERATUE UPON APPLICATION.

LAMBERT PHARMACAL CO., ST. LOUIS

Some Inetresting Experiments with Coated Pills.

By J. Fred Windolph, Brooklyn.

A black, shiny, gelatin-coated pill imbedded in a piece of pine wood board attracted my attention. It looked as if it had rolled into a dent in the wood, but it did not drop out when the board was inverted. Prying it out with a knife blade, I found in the wood a perfect impression of one-half of the pill. The pill itself was as round and handsome as gelatine coated pills ever are, and, except for the dent of the knife blade, the coating was not broken or scarred.

How did it get there? I had heard of pills "as hard as bullets," and "shot gun prescriptions" were no strangers to me. Was it possible, I reasoned, that some irascible neighbor, disturbed in the midst of his slumbers by the howling of another neighbor's dog, had inadvertently loaded his shot gun with cathartic pills, and that the one I held in my hand was a stray bullet; or, I should say, a stray pellet? That would be "throwing physic to the dogs" with a vengeance.

The piece of board that excited my curiosity was about an inch thick and had formed half of the cover to an ordinary packing case. An examination of the other half of the box cover revealed another dent into which the upper half of the pill fitted exactly. If I could have found a gimlet hole heading to this dent from the other side of the board, I would have been almost ready to believe that the pill had been run in hot and been moulded there. But the tell tale mark of a hammer blow told a different story. It was evident that the pill had been driven into the wood by a blow from a hammer, incredible as that seemed. To satisfy myself on that point, I placed the pill between the two boards, gave the upper one a sharp blow with a hammer, and the trick was done. The pill was imbedded half its thickness into the lower board.

It struck me that it must be an ancient pill that would stand such usage. I opened a bottte of pills recently received from the maker, and to my surprise they penetrated the wood almost as readily. This led me to experiment with other pills as they came in from the jobber.

The board used was an ordinary piece of pine about an inch thick, such as is generally used in large packing cases. The pills were all bought in regular course of business fresh from the jobber, except in the few cases noted. They are all quite commonly prescribed and made on a large scale by all manufacturers, as an examination of the list will show, and the makers represented are those whose products are most frequently specified by physicians on their prescriptions.

The bottles were opened as they came in and a pill from each was subjected to the test outlined above; in some cases, after the pill was imbedded in the wood, the smaller piece of wood was placed on end over the pill and it was driven further in, very much as the carpenter uses his punch in driving the head of a nail.

Each experiment was numbered and a record made of the kind of pill and the maker's name. The original bottles from which these pills were taken are now in my possession. I have indicated the manufacturers by letters of the alphabet for convenience of reference.

No. 1 was an ovoid 2 grain Cascara Sagrada Extract Pill; gelatine-coated, made by "A." It penetrated the wood without difficulty and without damage to its coating.

No. 2 was an ovoid, Post Partum Pill, gelatine-coated, made by "A." Penetrated more readily than No. 1 and without damage to the coating.

No. 3 was an ovoid Compound Rhubarb Pill, gelatine-coated, made by "B." Was as hard as a rock, if not more so—a single blow driving it deep into the wood without any perceptible effect upom its shape or coating. Later experiments with one of these pills showed that it could be driven unscathed clear through an inch board and then through a piece of lead pipe without so much as ruffling its covering.

No. 4 was a round Triplex Pill, gelatine-coated, made by "C." Very hard and resistant and was easily forced into the board unchanged.

No. 5 was an ovoid Brown Sequard Neuralgia Pill, gelatine-coated, made by "A." Flattened slightly under pressure, but was driven into the board with no in-

jury to the pill beyond a slight fracture of the coating.

No. 6 was an ovoid 2 Grain Sulphate Quinine Pill, gelatine-coating, made by "D." This was an old pill, the coating having turned quite yellow, but there was nothing indicating weakness or decay in the sprightly manner in which it landed into the board under the urging of the hammer, nor in the "Never-touched-me" expression of its unscarred form.

No. 7 was an ovoid 4 Grain Asafœtida Pill, gelatine-coated, made by "E." The mass seemed in fair condition, but it resisted the pressure to the extent of being driven in unaltered shape and with the barest fracture to its coating.

No. 8 was a round Compound Cathartic Pill, sugar-coated, made by "F." The first blow shattered the outer shell of sugar enveloping the pill, but failed to leave a mark on the pill itself or on the hard sub-coating that it apparently had. A second blow drove it well into the wood without further fracture.

No 9 was a round Aloes and Iron Pill, gelatine-coated, made by "F." The coating was rather brittle and cracked slightly on the top, but it was easily forced into the wood.

No. 10 was an ovoid U. S. P. Aloes Pill, gelatine-coated, made by "D." Passed through the ordeal and part of the board without difficulty.

No. 11 was a round 3 Grain Sulphate Quinine Pill, gelatine-coated, made by "F." The coating cracked, but it was otherwise unaltered.

No. 12 was a round Aloes and Myrrh Pill, gelatine-coated, made by "F." Very hard and looked just as handsome after it was driven into the board as it did before.

No. 13 was a round 5 Grain Blue Mass Pill, gelatine-coated, made by "C." Was very soft and plastic, so moist, in fact, that the pills stuck together in the bottle. Penetrated slightly and flattened out readily.

No. 14 was an ovoid 3 Grain Blue Mass Pill, gelatine-coated, made by "A." Was an old pill and forced its way into the wood unchanged in shape and appearance.

No. 15 was a round 2 Grain Sulphate Quinine Pill, coated, made by "G." The coating was very thin and the pill was crushed without leaving any trace on the board except powdered quinine.

No. 16 was a round 5 Grain Salicylic Acid Pill, gelatine-coated, made by "C." The mass was fairly soft, but it penetrated the wood in a flattened condition.

No. 17 was a round 5 Grain Blaud's Pill, coated, made by "G." Reduced to a powder like No. 15.

No. 18 was an ovoid anti-dyspepsia pill, gelatine-coated, made by "A." Flattened out, but left considerable of a dent in the board.

No. 19 was an ovoid 5 Grain Blaud's Pill, gelatine-coated, made by "C." Almost as hard as No. 3, and equally unchanged after being driven into the wood.

No. 20 was a round Stomachic Pill, sugar-coated, made by "H." Sank into the board more readily than No. 8 and with less injury to its coating.

No. 21 was a 5 Grain compressed tablet of Blaud's Mass, sugar-coated, made by "C." Penetrated the wood more readily than any of the other sugar-coated pills, the coating being entirely unharmed.

No. 22 was an old ovoid 5 Grain Bisulphate Quinine Pill, gelatine-coated, made by "A," and sank into the wood as any old pill will do under similar circumstances.

No. 23 was an ovoid Compound Rhubarb Pill, gelatine-coated, made by "B" —same lot as No. 3.

No. 24 was a round Compound Rhubarb Pill, sugar-coated, made by "H." The mass and coating were so hard that it easily penetrated the wood with nothing to indicate the force of the blow except a slight chipping of the coating.

No. 25 was a round Phosphorus and Strychine Pill, gelatine-coated, made by "F." Penetrated easily, coating and pill intact.

No. 26 was a round Compound Rhubarb Pill, coated, made by "G." Coating and pill crushed without denting the board.

After these experiments the board suggested very much the appearance of armor plate after a government test of some new projectiles. Some of these shots pass right through, others are imbedded at varying depths and some few make no impression on the target whatever.

Most of the pills penetrated more or less into the board. Pill No. 23 passed through an inch board with such surprising ease that I turned to some of the metals for other experiments. I took a piece of lead pipe, folded it around one of these Compound Rhubarb Pills that had just gone through the board, and struck the lead repeated blows with a hammer. I kept this up until the pill forced its way through the lower piece and left its impress on the upper, as shown in what might be called the "lead pipe cinch." The lead pipe was about an eight of an inch in thickness, but that did not bother the Rhubarb Pill or even crack its coating.

It is perhaps but fair to this pill to state that they were made at some distance from New York City, and naturally were not as fresh as when they left the laboratory. But, on the other hand, it must be borne in mind that the pills used in this experiment were all (with the exceptions noted) as fresh as it is possible for the pharmacist to procnre them. What would have been the fate of the board if these pills had been a few months older may be judged by the pharmacist who may in this manner test gelatine-coated pills taken at random from his pill stock.

"Leaden Pills" have their place in military warfare; but the physician in battling with disease should select his ammunition for other qualities. I make no comment on the solubility of a pill, whether coated or uncoated, which is of sufficient hardness to penetrate a pine board. I feel justified, however, as a pharmacist, in contending that the interests of the physicians, the patient and the druggist as well, are better served by pills extemporaneously prepared, or, in any event, by the use of such manufactured pills as are known to be in a permanently soluble condition.

I appreciate the fact that ready made pills are at times a convenience and that the habit of prescribing them is well established. Such pills now on the list of manufacturers, and others that may be added, will, of course, continue to be used. It would be well, in that case, if the matter of solubility of mass and coating were given consideration by the pharmacist and physician and preference shown for those pills which exhibit the drugs in the best form for ready assimilation and which lose that quality the least by reason of age.

The action of Piperazin Water in Rheumatic Gout, removing concretions and neutralizing excess acid in the blood, recommends this reliable remedy as a possitive curative agent. Treatment must be continued systematically for considerable time, but no unpleasant symptoms of any kind are observed.

Piperazin Water is preferable to the administration of piperazin pure, because there is a continuous action and a steady elimination of uric acid secretions; and through the addition of phenocoll, also freely soluble in water, the rheumatic irritating pains are combatted.

Piperazin Water is mildly carbonated, each bottle containing one gramme of piperazin and phenocoll; the dose per day is the contents of one bottle drank in wineglassfuls at frequent intervals.

It is twelve times as effective as Lithia Water and constitutes the strongest and safest uric acid solvent known.

Piperazine Water is largely employed as a timely preventative, fortifying the system, and, in non-medical language, repelling the onslaught of disease. It is prescribed to ward off gout as well as a specific remedy in the treatment of uric acid diathesis.—*Notes on New Remedies.*

Amenorrhea.

Dr. C. C. Abernathy writes: "I placed sample bottle of Dioviburnia, (Dios) in the hands of a young lady who had been suffering from amenorrhea for six months with instructions to use it and report result. At the expiration of two months she wrote me, 'You can safely recommend Dioviburnia—it has entirely relieved me.' Encouraged by this gratifying result I procured through our druggist a dozen bottles and have used them all and more in the treatment of dysmenorrhea, menorrhagia and leucorrhea, in all of which there is generally congestion of the womb and ovaries, and I am pleased to say that it has acted well in every case. I shall continue to use it."

When grating a nutmeg start from the blossom end. It will be found to grate much more readily.

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An Original Research on the Fluoroscopic Diagnosis of Certain Forms of Lung, Throat and Heart Disease, &c,†

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Wonderful as the Nineteenth Century has been in all that pertain to the development of science, the Twentieth Century promises, in one respect at least, to surpass it. The Nineteenth Century may be generally regarded as the triumphant period of the medical philosopher, the Alexander of modern times, who has so little matter left to conquer; the Twentieth Century will be the apotheosis, so to speak, of the progressive doctor and of his scientific colleagues who engage in the investigation of medicine and its allies.

The discovery of "X" ray photography by Roentgen will serve not only to immortalize the physicist who so fully developed it before giving it to science, but it will render the year 1896 distinguished as the "Roentgen photography" year, as 1894 and 1895 are distinguished as the argon and helium years. It seems as if the limits of human discovery were being reached, but the wonder of the new photography only emphasizes the possibilities of other victories to be won in the world of science.

Magic after all is but the art of producing wonderful results by the hidden forces of nature. What was the magic of yesterday becomes the common place of today, and so great is the leavening influence of scientific truth—that as higher conceptions of the material are unfolded, our mental development unconsciously responds and accepts the most complex and natural phenomena as simple and obvious facts.

Gleams of the future progress shines forth, from time to time, at the meetings of our scientific bodies, laboratories, and through the columns of their organs—an expectant world is ready to receive the invention by which the letter telegraph shall convey our actual writing as the telephone conveys our speech, and is awaiting the instrument by which our speech shall be conveyed to a distance without any connecting wires. The possibility of examining the interior of the human animal and vegetable structures during their physiological progress by such means as fluorescent bodies and electric force is no longer a hidden trick by dame nature. The advance is ever forward until the marvelous doings of the eastern stories will become every day events. The wider range of ideas which a more intimate knowledge of physical science has brought about enables the various magical discoveries in many of these fields to be accepted without hesitation, although a century or so ago such realities were almost unthinkable. In the same way many of the higher phenomena associated with etherial vibrations, of which we at present know little or nothing, reveal bewildering possibilities of transmitting thought, light, and colour, which many now would regard as inconveivable.

The Roentgen light marks an era in medicine and surgery which can be said, was by far the most important improvement made during last year's discoveries in the whole domain of this science. The further advancement made since in this field of work by others is simply of incalculable value.

By means of this Roentgen phenomena we are now able, incredulable as it may seem, some distance of several feet, gives to us the power of penetrating, thick books, stout deal boards, isolating the skeleton within its flesh, and muscular tissue itself, metals, and other substances, and shadow graphing them on photographic plates—the latter being influenced by the unseen light precisely as they were by common or visible light. This phenomena is simply a miracle of this age.

†Read before the Pan-American Congress, Nov. 16 to 19, 1896, City of Mexico. The results of these experiments were known to me since May 30th 1896.

The many investigators who took up this most fascinating subject and pushed it far into a more advanced state, gave daily attestment by new and singular results derived from the "marvels of the new light," especially in surgical, anatomical, and diagnostic experiments where still more the discovery is likely to prove an important a boon to suffering humanity as was the discovery of chloroform.

Of the further developments which have taken place, none perhaps are so important as those by Prof. Salvioni of Perugia, Mr. H. Jackson of Kings College, Thomas A. Edison, Nicola Tesla, and my own. I have succeeded in dispensing with photography, and have rendered the shadow picture visible to the naked eye by means of screens coated with fluroescent compounds, on which, in dark rooms, the skeletons of living bodies, the beating heart and certain diseased conditions of the lungs, foreign bodies in the larynx, nose, æsophagus, and other medico surgical interesting objects, &c., are to be seen by throwing them on such a prepared screen, and if desirous photographing these objects directly therefrom by the aid of a camera. We find the rays passing right through the interposed bodies, and showing on the screen the faint shadows of the object as, for instance, the throat or chest wall, and the darker shadows of the relatively more opaque bones or objects. By combining as said photography in connection with the screen the results is made of course permanent.

In order to make this subject matter before me clear to the general reader and hearer, some words on the Roentgen light, will be in place and add much to the further understanding of what I intend to say. We cannot all devote as much time to the deeper study connected with this phenomena, so naturally, there still are many who had not even the opportunity, or even the spare time, to look into the more salient and scientific points, except from what they gathered by the either reading the lay press, or from a few scattered fragmentary articles. I propose to supply this deficiency, as far as I can bring it up to date, in a most simple and comprehensive manner in connection with the subject of this paper before you.

The fact exists that a means has been found by which a photograph can be taken and viewed as if a solid substance did not lie between the photographic plate, or camera, and the object to be photographed. This sounds very misteri ously, but a simple explanation will make it quite clear.

Before going into details of the "X" rays and fluorescense and their joint application as an aid to diagnosis in certain throat, lung and heart effections, &c., to which I shall make detail reference. It will be also essential that I acquaint you previously with a few more preliminary facts connected with light and undulatory movements in general. According to the theory of the propagation of light which is at the present time generally accepted,

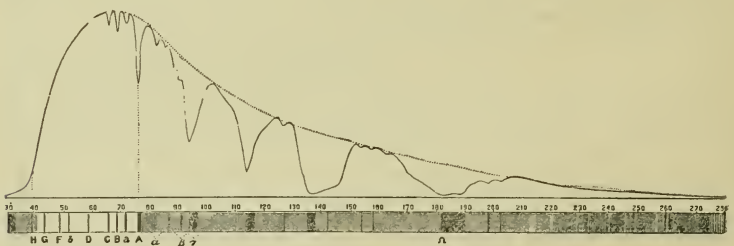
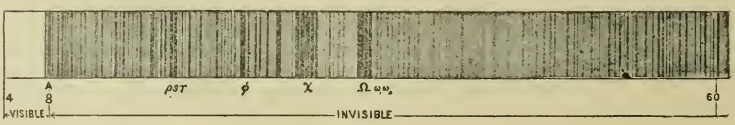


FIG. 2.—Langley's normal bolometric spectrum, showing curves of galvanometer deflections (from the *Photogram*).



known as the undulatory theory, light consists of wave-like motions, taking place in a medium, called the luminiferous ether, which, as far as we know, pervades all space and all substance. It bears a very close analogy to sound, which is undulatory movement taking place in air or other gases, as well as in many cases in solids. Heat also consists of an undulatory movement in the ether similar to that of light, but of less rapidity. Every one is familiar with the action of a prism of glass in which bright light falls in throwing colours on surrounding objects, the most familiar examples, perhaps, being that of the old glass chandelier with triangular hanging lusters. It has been found by experiment that white light, such as that of the sun, consists of a mixture of light of all colours, and it has also been found that the various colours are due to rays vibrating at different speeds, although propagated longitudinally, as far as we know, at the same rapidity. If we apply a prism to a beam of light passing through a narrow slit, we find a strip of coloured light is projected on, for example, a piece of white paper or wall on the other side of the prism. This strip will have at the side nearest the point of the prism a red colour passing gradually to orange yellow, green, blue and violet, but beyond this violet coloration other rays fall which, although invisible to the eye can be examined by means of photography. Again, too, in that part of the spectrum lying outside the red coloration we know from experiments that there are also rays.

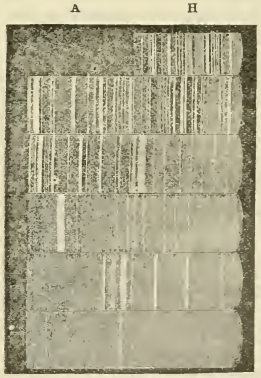
Experiments has led us to the conclusion that heat rays, even proceeding from a hot substance which emits no light are bent by the action of the prism and that the spectrum obtained is practically continuous, and ranges from the dark heat rays through red and the other colours have mentioned far beyond that portion which is visible. This latter portion beyond the violet has been christened the "ultra violet."

A Few Facts on Early Works in Invisible Rays.

Your attention is called to some early work on the invisible rays. It is known that the force which we call light is not a tangible entity that we can lay hold of like a piece of wood; it is a very rapid wave motion or vibration of a hypothetical medium called luminiferous ether, which motion, communicated to the retina, gives rise to a sensation which we call light.

We are accustomed to speak of substances as being opaque, translucent, or transparent, but these terms are not absolute by any means, as will be seen from the following statement: A sheet of gold of, say, an eighth of an inch thickness appears to us to be opaque—that is, we can not see through it; ordinary glass, on the other hand, we can see through. But reduce the gold to a thin film by rolling and hammering, and it allows light to pass through; increase your glass to a very great thickness and it becomes absolutely opaque, or allows no light to pass.

We speak of day light as white light, but if a narrow slice of day light is allowed to fall upon a prism, as just spoken off above, the spectrum is obtained. When sunlight or daylight is examined in this way, the spectrum is found to be crossed by numerous transverse dark lines, which may be popularly described as landmarks or milestones. Of such a comparatively finite nature is our sight or brain that we can only discern a very small portion of the spectrum; that is to say, as long as the vibratory motion lies within certain limits we are sensible of the same as light but at either end beyond these limits stretch fields utterly away from our visual sensations, but they can be detected by other means, such as photography. In the spectrogram of the spectrum of cadmium, as made by J. W. Gifford, of



London, we have a reproduction of a

photogram of the spectrum. This illustration shows that the only portion which can be seen by us is that part lying between A and H. It has been demonstrated that there are vibrations or waves far beyond this origin, as is shown by photography. In this region beyond H, or the violet, it stretches at least nine or ten times as far; how much farther we can not say. Langley's spectrum, which he made by means of his bolometer, shows us the red at one end, and in the infra or invisible spectrum, as seen in Figure 1. Professor Langley, of the Smithsonian Institute has given us some very valuable information in regard to the spectrum of invisible light by his most ingenious invention, the bolometer. This device, as used by him, consists of an instrument for measuring minute differences of radiant heat by changes in the electric resistance of a blackened conductor exposed to it. It consists of a series of plates of metal connected with a battery and galvanometer, to the latter being attached a very minute concave mirror, on to which is thrown a narrow pencil of light. When the spectrum falls upon the blackened surface connected with the metal plates, the electric resistance is changed, the galvanometer is deflected, and the spot of light reflected from the concave mirror, which is hung upon a very fine quarts fibre, is received upon a photographic plate. On development, a figure like the chain of mountains shown in Fig. 1, above the spectrum, is obtained, from which the lines spectrum (called a bolograph) is constructed. The theory is that where the infra-red spectrum falls there is a development of heat, and therefore there is a deflection of the spot of light. With the bolometer it is possible to measure a difference of heat of a hundred-thousandth of a degree of Fahrenheit thermometer scale.† In experiments made by the late Professor Tyndall, in his most popular lectures, at the Royal Institution, he concentrated the invisible red rays from an electric lantern, and in their focus fused and burned many metals. Captain Abney also photographed, in an absolutely dark room, a kettle of boiling water, by the same infra red rays. The close connection between light and electricity has long been known, for Clerk Maxwell enunciated the theory that light itself was but an electro-magnetic phenomena, and that what we call waves of light were not mechanical waves at all, but were immensely rapid electric displacements taking place in all pervading ether of space; and Professor Sylvanus Thompson states it as his opinion that with further developments of the theory it would be found to satisfactorily explain all the phenomena of light. That electricity generates light or vibratory wave motion is, of course, common knowledge, and that electricity is itself but a wave like motion has been shown by the classic experiments of Hertz, who proved still further the similarity of electricity to light by reflecting and refracting the waves of electricity he generated just as if they had been light-waves. We can not see electricity, and we can not see the ultra violet and infra-red rays, but we can prove the existence of the same by very easy experiments. In the case of electricity, the famous researches of Hertz have placed the existence of the infra-red light waves has been proved not only by photography, but also by Professor Langley's bolometer, and the results obtained by this as well as by photography in the ultra-violet. Besides, however, these waves or rays, there are others directly connected with the phenomena of electricity which become distinctly visible under certain conditions. If we take a glass tube and pass it through each end and close the ends up, and then draw the air off by a fine aperture so as to leave, as far as we can, very little or no air remaining, we have what is known as a Crooker's tube; and on passing a current of electricity through this, we obtain some striking phenomena. For instance, from the anode, or positive pole, of the battery, induction coil, or static machine supplying the current, we have a series of beautiful striations or striae of light, which vary in color with the gas, a small residuum of which remains in the tube. These, however, have but little interest for us. From the cathode, or negative pole, proceeds a stream of rays which have some extraordinary properties, and have received the name of "cathode rays." In the first place, these cathode rays cause the most brilliant phosphorescent even in glass, but on certain well known chemical products the light is extremely

†E. J. Wall, F. R. P. S., Invisible Rays, London.

brilliant and it is possible, by the interposition of screens or patterns cut to a particular shape, to obtain sharp, clear cut shadows of the pattern. Further than that, if a series of light vanes or paddles is mounted on an axis inside of these tubes, they will rapidly rotate like the well known radiometer or light mill. Then, again, these cathode rays have the property of passing through thin metallic foil in an absolutely straight line, and exciting fluorescence when allowed to fall upon paper saturated with various chemicals, such as platinocyanide of barium or tungstate of calcicum. Herr, Lenard, of Hungary, examined these rays in 1864, and conducted numerous experiments. By placing the ordinary photographic plate and sensitive paper behind various substances, such as aluminum, wood, quartz he was able to obtain shadow images, or photographs, so-called, showing the permeability of these substances to these rays. On applying an ordinary magnet to these rays, it was found that they were deflected or attracted by the magnet. Practically, then, we have come back to one of our first statements—namely, that the terms opaque, translucent, and transparent are but relative; they are practically interchangeable under certain conditions; for quartz, which is quite transparent to ordinary light, is absolutely opaque to these rays, and aluminum and cardboard of such a thickness as to be opaque to ordinary light are transparent or translucent to these rays.

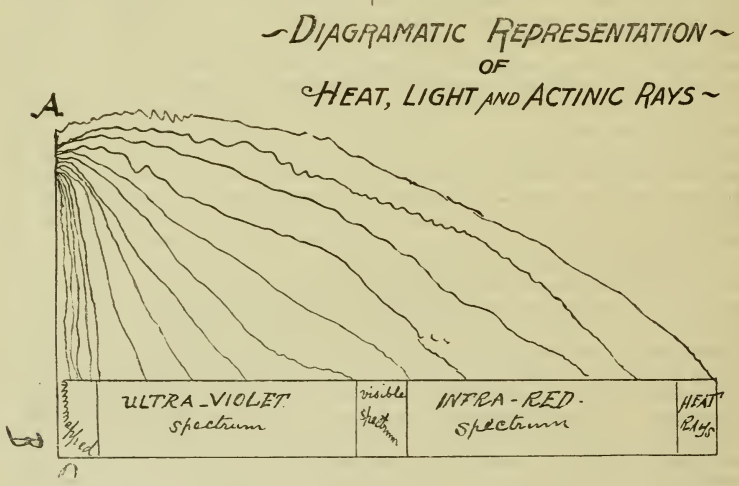
This brings me to the point of considering in a consise manner especially the new light of Roentgen, the new photography, &c., the fluoroscope, and their joint application in Fluoroscopy. This discovery gave rise to considerable incredulity and fun at the expense of the learned professor, and even some of the shining lights in the scientific world were not loath to show their erudition by discounting the discovery, and ascribing the effects to the ultra-violet rays and the electric waves of Herts. The discovery of these new rays, which bear the now famous name of Roentgen, was due, as is so often the case, entirely to accident. He was experimenting with a Crookes's tube wrapped in an opaque material, and on his bench lay a piece of sensitive paper on which he found, after a powerful current had passed through the tube, that a black line had been formed on the paper. Keenly alive to all extraordinary phemonena, the observant professor proceeded to investigate with the result of the discovery of what is practically something absolutely new, the value of which we cannot at present entirely begin to appreciate. Now as to the difference between the cathodic and the "X" rays of Roentgen.

The essential differences and similarities between the cathodic rays and "X" rays may well be seen from his original communication. Nevertheless, a brief summarizing of these facts will bring them again before your notice. Roentgen light is not deflected by magnets, cathodic rays are Roentgen rays. The Roentgen light will traverse several centimetres of of wood and several millimetres of metal or glass, while cathodic rays fail to pass through any but thin films of glass, aluminum, &c. The Roentgen rays excite fluorescence and give shadow pictures at a distance of many inches, and even feet, from the Crookes's tube, while the cathodic rays are absorbed or diffused at a distance of fifty inches. The cathode rays proceed from the cathode itself while according to Roentgen, the "X" rays do not proceed from the cathode, but from that part of the glass where the cathode rays strike. The main point of similarity between the two are their powerful action on photographical sensitive films and their rectilinear propagations, as shown by the sharply defined shadows. How are these cathode rays formed? The air is a bad conductor of electricity, and when the latter passes across an air space we observe a brilliant spark; but, as has been stated, by exhaustion of the air the character of the discharge is altered, a fact first discovered by Hittorf and worked out by Flucker and Geissler, whose tubes are well known. Fantastic patterns are formed inside a vacuum, distinctly visible in various colors because of the peculiar nature of the glass or fluid which surrounds them. In 1879 Crookes replaced the cathode wire with a small flat or plane surface, and obtained a cylindrical beam of light which, proceeding in a straight line till it reaches the opposite wall of the tube, behave itself rather like a magnetic rod than like light, and possesed an elasticity

of extraordinary character. The one end was closely connected to the negative electrode, the other, however was free. It has been well known for some time that this "magnetic rod," or cathodic light, was extremely rich in ultra-violet rays, and setting up chemical action. To explain these phenomena, Crookes assined that this stream of light was caused by a continuous stream of molecules of gas of enormous rapidity, proceeding from the cathode, while in a Geissler tube, which contained more gas, this repulsion of the gas molecules from the negative pole was to some extent accompanied by continuous colisions of the gas molecules. This hypothesis received a decided blow by the discoveries of Hertz and Lenard. Hertz stated that it must be possible to produce this phenomenon outside the vacunm tube, and that, being engendered in the tube, it must extend into the surrounding air. Lenard tested this experimentally, and found a substance which would allow the cathode rays to pass into the air. He obtained a Crookes's tube, and at the end opposite the cathode, where these rays struck, he replaced the glass with a sheet of aluminum, which was of about the thickness of gold lief, but was at the same time absolutely impervious to gases. By placing in the path of any rays which might proceede from this aluminum window a piece of paper soaked with fluorescent substance, Lenard proved conclusively that Hertz assumption was correct, and that Crookes's explanation of the continuous stream of gas molecules was no longer tenable. Roentgen's grand discovery followed all this.

The rays which Professor Roentgen has discovered resemble in many points the previously known cathodic rays, and although their nature has not yet been entirely satisfactory ascertained, there is I believe no reason why they should not occupy the same place with regard to the ultra violet rays of the spectrum. It is from this assumption that I have designed this diagram Figure 5.

I have taken a point A from which I



have drawn wavey lines, to represent the undulatory movement of heat and light rays, which you will notice have their summits corresponding to one another, but since they lie less and less obliquely to the base lines, which I have indicated in the spectrum, the distance on any particuliar ray from the summit of one wave to the summit of the next gradually diminishes as they approach the left until at length we arrive at the line A O which lies at right angle to the base, I am for the present supposing that the rays I have spoken of as cathodic rays lie immediately to the right of this vertical line and that the rays to the right again of these represent those forming the ultra-violet portion of the spectrum.

I have taken the vertical lines A O in which there is no lateral vibration, to represent the rays discovered by Professor Roentgen, and which he has called "X" rays although this is quite possible far from the truth, since experiments up to the present has shown that they can only be refracted or bent by the prism in a very slight degree and the rays more refracted out of their course as they approach the left.

Now, having touched upon the main principles and theories associated with these light rays, I shall call your attention to the screen, or fluoroscope.

The accidental discovery of the phosphorescent screen by Salvioni, Roentgen, and Lenard, and the latest improvement upon it by Thomas A. Edison, called by him the fluoroscope, are the outcome of the phosphorescence tubes. They are simply tubes filled with certain phosphorescent powders and hermetically sealed. When the tubes are observed in a dark room (and of course before exposure to light), they are invisible; if, however, a piece of magnesium wire is burned close to the tubes, they will be found to shine in the dark and to emit various colored rays of faint light. To this curious effect is given the name of phosphorescence; and the same result is also obtained when they are exposed to sunlight. The chemical substances which possess the property of developing light after exposure to light are called phosphori. There are many forms of these substances known to us, prepared differently and bearing different names. The phosphoresence of these various bodies, unlike that of the curious element phosphorous, is produced independently of any chemical change; if they are inclosed in sealed glass tubes and excluded from light, they retain the property of showing phosphoresence for many years, while the light emitted from phosphorous is due to the slow oxidation of this element. On placing it in water or in nitrogen, the light is no longer produced. This question of on what principle it is possible to explain the cause of the emission of light after exposing phosphorous to the sun or any brilliant artificial light has given rise to several theories. The most rational one suggested is that the undulations of light conveys their own vibratory motions to the phosphori, just as one musical instrument may cause another to vibrate sympathetically with it, and phosphorescence is observed so long as the substance continues to vibrate in a dark room, and without a constant accession, or supply of vibratory power the light becomes fainter and fainter until it is no longer capable of affecting the eye; the vibratory power, like any other mechanical motion, must come to an end cut off from its source of power; the sun or the burning magnesium, which originally set it in motion. This opinion is further confirmed when we take into account the large number of substances which may become phosphorescent in a tolerable high degree. If this property was confined to a few bodies, the theory might not be so applicable; but if it is agreed before hand that any particles may become luminous if they are capable of entering into that state of vibration which we suppose belongs to the sun and to artificial sources of light, then it can be understood why the great number of organic or inorganic substances are all considered to enjoy, in a limited degree the property of phosphorescence after exposure to the sun. Gmelin enumerated a large number of chemical bodies and common substances when he spoke of those things which became phosphorescent by irradiation. Also, Edison examined 1,800 substances and found seventy-two that were fluroscent.

Speaking of all that was said above, let me still, in a more primary way, convey to you these physical facts. In the first place it must be remembered that every body, however solid it may appear, is really composed of a number of small particles, each quite distinct and not one touching any other. That is, there are spaces between the little particles composing any mass of matter. Now we all see every day how a nail can be driven into wood, or how a steel spike may be forced through an iron plate. This is done just as the hand is thrust into water, that is, by making the nail or spike thrust aside the particles of the body to be penetrated.

These particles composing any certain mass of matter are vibrating constantly. All the particles of any especial kind of matter have the same period of vibration. That is, particles of glass vibrate so many times a second, the particles of iron so

many times, and so on. Now along comes a ray of light. It strikes a strip of wood. The ray is vibrating such and such a number of times. The particles of the wood have another period of vibration. These two periods are so related to each other that the ray of light cannot penetrate the wood. It is absorbed and disappears. But suppose that this ray of light strikes a plate of glass. There is such a relation between the periods of vibration of light and glass that the ray is able to pass through. The more perfect the glass is the more transparent it is, which is to say, the more freely it permits the ray to shoot between its particles and escape to the other side.

The Principles of Vibrations.

This is simply to demonstrate to you that the way to slide one thing, as light, through another thing, as wood, or any other substance, as the chest wall, &c., is to get them so that the periods of vibration of these will bear a certain harmonious relation each to the other. In ordinary words, if you can get a ray of light to vibrating so that it will perfectly dodge and sneak between the particles of wood, &c., you can see through the wood or other opaque objects just as you can see through glass, whose particles are so vibrating that light dodges between them naturally.

Now let us see what a ray of light is. Physicists have analyzed it and have found that it is composed of a line of particles or appearances that have all the effect of particles, and that in different parts of this line the period of vibration is different. For instance, in the red part, which forms the visible end at one extreme end of the spectrum, the vibration is at the rate of about 30,000 to every forward movement of a twenty-fifth of an inch. That is, before the red part of the pencil of light can go forward the twenty fifth part of an inch it has vibrated up and down 30,000 times. At the other visible extreme of the spectrum the pencil of light is the violet ray. For every twenty-fifth of an inch of progress that the violet ray makes it vibrates 81,000 times. The other colors of the spectrum are in between, shading each into the other and vibrating more than the red and less than the violet, according to their distance from it.

Beyond the last visible red rays are other rays which can be detected by chemistry and photography, although invisible to the eye; and beyond the violet ray are other rays which cannot be seen with the eye. These infra-red rays vibrate more and more rapidly. Thus, you see, the human eye is so constructed that it can only see light that vibrates more than 30;000 times to the twenty-fifth of an inch, or less than 81,000 times to the twenth-fifth of an inch. Between these two the human eye sees. Beyond, on either side, it cannot see.

This brings me to the point of considering, in a concise manner, the new light of Roentgen, and the Fluorospic Diagnosis of certain forms of lung and heart diseases, &c.

What the scientists are probing after is, are these "X" rays modifications of the known ray of light, or are they a new kind of light produced by the combination of electricity and a vacuum? Above I have spoken to you which gave the foundation to the birth of the "X" rays, and now upon which the point of Roentgen's discovery rests was this: We discovered that if you take your electrified vacuum bulb and a photographic plate, properly sensitized, and place between the plate and bulb a human hand, or any opaque object, you will find upon the plate after a few minutes exposure not a picture or a shadow of the hand, &c., but a shadow picture of the skeleton of the hand or what was behind an opaque object, as behind the wood, &c., with no trace, or only a slight trace, of the flesh that should appear if a similar exposure had been made in daylight or in ordinary light.

That is to say, in some unknown way, the rays of light about the negative pole in that vacuum have been so altered from the ordinary period or manner of vibration of light, that they will penetrate flesh, &c., dodging between the particles that compose them, as ordinary light dodges between the particles of glass and other transparent substances.• Just what change is effected in light the scientists of today do not yet know.

Scientific men are divided into three great classes—those who study abstract science and seek new and absolutely untrodden paths, in the realm of the unknown that presents itself on every side for man to conquer; second, those who

follow in the wake of these greatest men and profit by their splendid ventures by making the discoveries of new principles; and third, those who follow the second class and turn their discoveries to practical use. For instance, more than fifty years ago Farady laid down the broad principles of which this Roentgen discovery is only one very small result. Farady's generalization was carried forward by Maxwell, and Hertz, and Lenard, resulting as before said, in countless benefits today to the human race under further development by such men as Bell. Tesla, Edison, Lodge, Thompson, and an army of others. Roentgen has only developed the work of the developers of Faraday's theories a little further, and in the wake came others.

They all have seized eagerly upon the announcement of Roentgen and have gone to work to find out several things: One of the first was what substances the "X" rays will penetrate, and under what con ditions and to what extent, and second, how can these penetrations be turned to practical advantage, &c. They seize with almost equal eagerness upon every new announcement of the perfection or elucidation of what has previously been a theory. But in this case the discovery was practically an immediately useful thing. For any man can, with a moment's thought, call up a score of ways in which it would be beneficial to be able to make any sort of a trustworthy photograph through an opaque substance.

The most obvious advantage is to surgery and medicine. For if this cover of flesh can be made so that it will be as if a glass, and there are already most con vincing, positive proof before us. The future will decide, beyond a doubt, its other many undiscovered advantages.

My reasons for having led you into some of the intricate mysteries of the physics of light was to acquaint you with such fundamental known principles upon which that discovery, we are dealing with in this lecture, and specially for the intelligent application and comprehension of Fluoroscopy. This method, no doubt, must take its rank in the foremost methods of diagnostics, not only in this realm, but also in other branches of medico-surgery.

Much difficulty and involving of cost has been experienced by every one who is using the Crookes tube of different types found by the various manufacturers and inventors. Still these vacuum tubes are the primary and most necessary of all the apparatus in "X" ray work and upon them depends the best results. I find I cannot do better than say a few words "on vacuum tubes." This will save you many a dollar and many a headache while working with the "X" rays.

While a Crookes tube cannot be conveniently made, as can the other essential portions of this outfit, considerable care must be taken in selecting one for purchase, a few hints will be useful to the unitiated. It must be borne in mind that the Roentgen ray is as yet an unknown quanity, and a days discovery may contravent all the hints here given. However science is now obtaining the best results with tubes that conform to the following general conditions.

The tubes must be of the thinest glass available, and sufficiently strong to withstand the mechanical stress due to the pressure of the atmosphere. Thick glass when used in Crookes tubes heats to a very high temperature, and as the tube is forced, it frequently gets red hot under the influence of the discharge. By experimenting with tubes having both thick and thin walls, it was found that thick were heated to melting while the thin walls remained quite cool. A thick wall is more strongly fluoescent than a thin wall, but is greatly inferior to it in radiographic power. For this and other reasons, it is very doubtful if the intensity of the fluorescent of a Crookes tube is a criterion of its excellent as regards its ability to generate Roentgen Rays. The size of the tube is an important feature. If sharpness of detail is particularly desired, the smaller the tube the better. In fact, some of the best results have been taken with so-called "perfect vacuum" tubes. These tubes were primarily designed to demonstrate the fact that a perfect vacuum attainable by any known means. This tube when placed in circuit with a powerful induction coil, presents such a high resistance to the discharge that the latter prefers to strike arround the outside of the tube rather than to pass through the interior. This very prettily shows the principle the tube was intended to demonstrate. This tube,

however, has the property of generating Roentgen rays when excited by an ordinary induction coil, and as it is very small it casts an extremely sharp shadow, for a precisely analagous reason to that which accounts for the sharpness of the shadow cast by the ordinary arc light. The short distance between the terminals of this tube permits the use of a corresponding small induction coil, and it is, therefore, a desirable tube for those who cannot afford elaborate and powerful apparatus. Up to date there is no particular advantage in a large Crookes tube. Small ones when properly excited seem to give just as powerful emanation of Roentgen rays and have the advantage of giving a clearer definition.

The shape of the tube is of as great importance as the size and technical discussion is now ripe as to which is the best. The latest theory of the source of the Roentgen rays is that they emanate from the surface or surfaces that are first impressed upon by the cathode ray or rays proceeding from the negative pole of the Crookes tube. This generating surface may be, and indeed often is, the anode. For this reason several eminent authorities were deceived into stating that the anode was the source of the Roentgen rays. This it will be seen, in the light of what has just been said, is only true in certain cases. A metal surface seems to be a more powerful source of Roentgen rays than a glass one when subjected to a cathode bombardment, and of the metals platinum appears to be the best.

The metal in this case does not reflect the Roentgen rays. It is, instead, the source of them. This fact was discovered through a very fortunate circumstance. Crookes, in showing shadow effects, constructed tubes with a shield of metal mounted in the tube, as shown in Fid. 5.

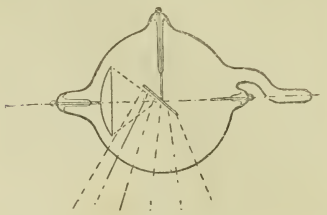


Fig. 5.

Pictures taken with such tubes were wonderfully sharp and distinct, and subsequent investigation developed the cause. Mr. Herbert B. Shallenberger, who was, perhaps, the first to produce Roentgen pictures of marked perfection, undoubtedly owes his success to the fact that among other favorable conditions he employed a Crookes tube of this type, slanting it, as shown, for best destribution. Therefore, it is well to select this type in preference, provided that it otherwise fulfills the requirements.

Now that Crooke's tubes are being made especially for Roentgen photography, tubes of this type are to be had

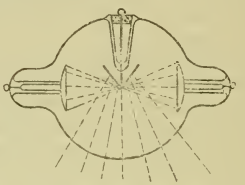


Fig. 6.

which are a decided improvement on the old Crooke's form for demonstrating the theory of luminous shadows. Such a tube is shown in Figure 6. Prof. Elihu Thomson has gone so far as to suggest that such a type be made standard.

Mr. A. C. Swinton has employed the tube shown in Figure 7 with great success. Prof. Thompson's type and that of Mr. Luinton, it will be noted, differ only in detail. The mode of connecting this kind of tube varies with the source of electrical power employed. An induction coil discharge is practically a pulsating discharge, always in the same direction. Therefore, the terminals of the Crooke's tube maintain their identity; that is, one is always anode while the other is always cathode. If a condenser and Tesla coil are employed, the discharge becomes oscillatory and the tube terminals are alternately cathode and anode. For use with an induction coil alone the middle plate should be made the anode, and the two end plates should be connected together and made the cathode. In this case the cathode rays strike the anode and the Roentgen rays are projected. With oscillatory discharges, the tube is connected so that the two end terminals are the electrical terminals, the middle

plate being disconnected from any source of power. It will be seen that as the end terminals become alternately cathode, they project the cathode rays upon the middle plate and thus generate the Roentgen radiations. In either case it will be noted that all of the cathode rays generated in the tube are projected against the middle plate and are thus effective.

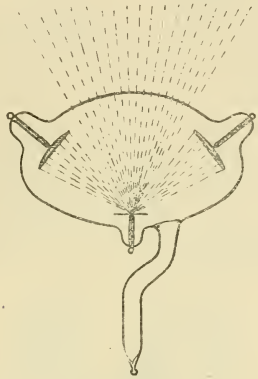


Fig. 7.

Tubes like that shown in Figure 8 are quite common. Roentgen pictures can be secured with such a tube, but the best results are not attained. On examining the tube with a fluoroscope, it will be noted that the light is not evenly distributed. The edges of the cathode rays against the glass directly in line with the plane of the terminal disk. This line of fluorescent glass is the most brilliant source of the Roentgen rays, and is sure to make a white streak across the picture. This nonuniform distribution is, of course, undesirable.

Another shape of tube, which is on the market; shown in Figure 9, is built upon the theory that the Roentgen rays come directly from the cathode. This was one of the first theories and has been discarded. Such a tube will give results perhaps as good as any of the tubes not especially designed for Roentgen pictures,

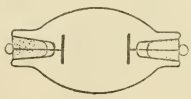


Fig. 8.

but is not an improvement on them, for the theory on which it was designed has not proven to be the correct one. The tube shown in Figure 10 has also been used. It will be noted that its distinguishing feature is the auxiliary terminals on its exterior. These enhance the Roentgen effect. They are merely a modification of the tubes without terminals passing through glass, and, in fact, are a combination of tubes with internal terminals. The benefits of this practice may readily be had on any Crooke's tube by pasting a tinfoil cap about each terminal and electrically connecting it therewith. Whatever the benefit of the tinfoil cap, as far as Roentgen rays are concerned, it is decidedly useful in preserving the tube, as it minimises the danger of puncturing. The tube shown in Figure 11 is, perhaps, the best tube of any of this class, having

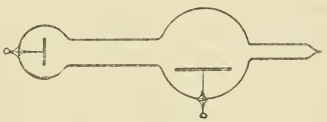


Fig. 9.

but two terminals. The saucer shaped terminal is the cathode, and from what has been said its principle will be seen at a glance. It was designed by a professor at King's College, London. It will give good results with an induction coil, but is not suitable for use with disruptive gap currents. The shape of the terminals is also quite important, but aside from arranging them for projecting the cathode rays, little experiments has been made. In Crooke's tubes, before Roentgen rays were known, terminals were made of many shapes, but with other purpose in view. Flat and saucer shaped disks are used with success, and there is the specially shaped reflector terminal in the Thompson projector tube already described. The writer has noted that cathode rays are projected with great intensity from sharp points and edges, and suggested that tubes be constructed with cathode terminals armed with sharp points, the better to project the cathode rays against the generating plate. The value of this idea requires to be experimentally demonstrated as yet.

The degree of the vacuum is the next important feature. To every degree of

vacuum there is a corresponding electrical excitation which gives the best results. Highest vacua are not necessarily the most desirable. It is said that superior results are obtained where the vacuum is at that degree of alternation the striæ just disappear

Continuous excitation of a Crooke's tube has the effect of raising the vacuum,

Fig. 10.

but if the excitation be increased proportionally, the Roentgen effect will be improved. If, however, the excitation is at its limit. the tube can be brought back to its range by gently warming it in a Bunsen flame, or the flame of an alcohol lamp. In purchasing a Crooke's tube it is impossible to tell of its quality by mere inspection. Reputable dealers in them should provide means for exciting them and a fluoroscope for examination, so that the buyer can seen exactly what he is getting. The buyer on the other hand, should insist that the tube be tried in some way before purchasing. At least the tube should be excited so that the grade of glass and the degree of vacuum can be demonstrated paraphernalia to the

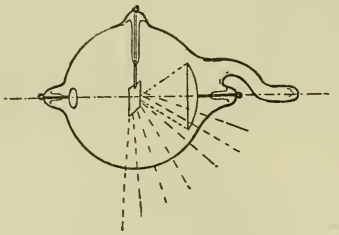


Fig. 11.

practice of fluoroscopy, &c.

The most essential parts of the paraphernalia used for the successful practice of fluoroscopy, and Roentgen photography, can be summed up in a simple and plain manner. The first part to that collection is a dark room specially accommodated for that purpose or made ready for it. Next on the list comes the Rhumkorf coil, focous vacuum tube, break motor, storage batteries, or the connecting up to the electric light main, condensers, fluoroscope, &c.

The "X" rays are generated by either a dynamo, battery, a static machine, or induction coil, and a Crooke's tube. For large size coils a dynamo current is best for example, a coil giving a spark of ten inches or more requiring a current of 10 to 12 amperes to run it. There are many similar devises used in this work and those are so adapted according to the taste and experience of each independent experimentor.

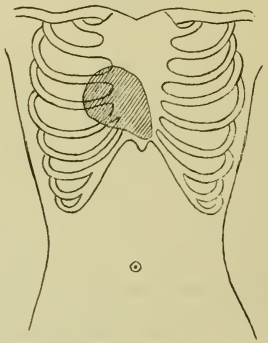


Fig. 12. Adhesion right side. Heart pushed out of position.

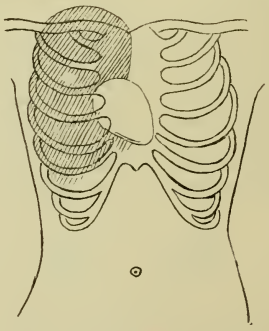


Fig. 13. Right side. Cavity,

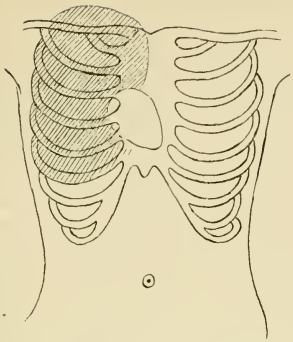


Fig. 14. Pleurisy with large effusion. Right side. Heart out of position.

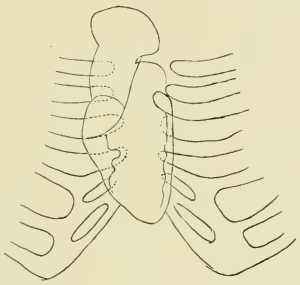


Fig. 15. Aortic anurism.

Having through these pages traced the principle underlying the phosphorescent screen, or fluoroscope, a brief outline of this invention is in place. The fluoroscope is really one of the most simple of a Roentgen outfit. This special screen is in its latest dress, as designed by Edison. It consists of a flaring box, curved at one end to fit over the forehead and eyes like a stereoscope. The end of the box is closed by a pasteboard cover on the inside of which is spread a layer of tungstate of calcium, which, according to reports, has been found to possess six times the fluorescent power in the influence of these "X" rays than that of many other salts; than several very much better fluorescent substances are being found and coming into use.

In fluoroscopy the fluoroscope should be large enough to admit the viewing of a large space of the chest wall at a time. You will observe in my illustration that I make use of fluoroscope without any flare, only a framed pain with fluorescent material distributed over it. The size being 14 by 18 inches. This takes in an entire front or back view of the patient. This, however, I would not advise for the general practitioner, an ordinary one is sufficient, measuring 6x6 inches. For clinical demonstration to a large number of students the square pain fluoroscope is more practical. The art of photography can also be brought into play, which I consider an importrnt role, and described by me already elsewhere as *photo-fluorography*. That is the act of photographing in the dark room the shadow as it appears on the phosphorescent screen.

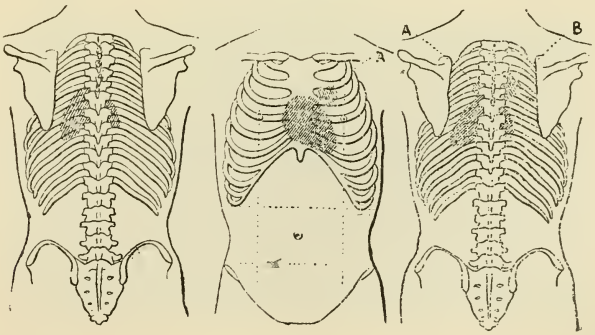


Fig. 16.

A Few Facts Gleaned from my Clinical Experimental Records on Fluoroscopy of Certain Forms of Lung, Throat and Heart Diseases, &c.†

These clinical facts which I give here were obtained by me early as May, 1896, during the first heat for priority in "X" ray and fluoroscopic experimentation. Although many doubts were expressed concerning my reports and those of which Mr. Nicola Tesla saw, yet some scientific men are exceedingly dubious concerning the results obtained by other scientists unless the same are confirmed by addi tional witnesses; nevertheless, these facts stand upon their own merits, and were obtained by myself and others since then. The fluoroscopy practised in the many instances of which I give the following record of cases, is not a mere fantazi on my part, but as stated, others can corroborate my statement since my early work. Much care and ingenuity, I admit is necessary to obtain clear outlines in this practice, and at the present status of the apparatus as invented, the results are not to what they will be in the near future. Enough is said, that the birth of fluoroscopy exists and is developing daily.

These summary notes will, I know, be welcomed by the scientific physician who sees at a glance the future possibility of a more extended use of fluoroscopy in chest diseases, just as laryngoscopy, opthalmoscopy, bore the ripe fruits of with some years of practice. I call your attention to the first case.

The Roentgen rays arrests partly pleural effusion, resulting in the formation of a dark spot on fluoroscopic examination, which is in sharp contrast with the light color of the healthy side. Pursuing my study of several cases of pleurisy, I found that the light area marking the apex of the thorax became more extensive in proportion as the effusion was absorbed. In one of these patients, however, the opacity persisted at the apex, while a light space made its appearance towards the middle of the diseased side as the effusion decreased. Since then two similar cases were examined, and just such similar conditions gave their evidence. Finally I found that the effusion had been almost completely absorbed, the apex still continued dark. This fact, which had not been observed in two other cases, leads me to believe that there was condensation of the pulminary tissue at the apex of the lung on the diseased side. Pursuing this further with our percussion and ausculta-tion methods, the corroboration revealed the truth of the accuracy of fluoroscopic tests. This showed the case to be one of existing incipient infiltration, marked at first by the pleural effusion. Fluoroscopy here, thus far, has been the detector of pulmonary tuberculosis. The other evidence, at our disposal, agreeing with first fluoroscopic diagnosis.

A number of tubercular patients were put to the crucial tests and fluoroscopy, which invariable gave me to see a pulmonary lesion, by throwing on the fluorescent screen a shadow, the limits of which corresponded exactly with the data

†NOTE.—The illustrations of cases here given are mere scematic drawings from my note book, and are not anatomically correct, as would be the case if a radiograph was made. They are merely notations of fluoroscopic observations.

Fig. 17.

furnished by the other methods of physical examination, the intensity of the shadowing indicating the depth of the lesion. In four cases, light spots, delineated on the dark ground, gave evidence of the existence of cavities, which was confirmed by auscultation. A number of other patients, however, in whom auscultation had revealed the existence of cavities, these did not show on fluoroscopic examination. A singular case presented the following facts: Constitutional symptoms and cough indicated incipient tuberculization. Examination of the expectoration for the bacillus was negative, and the physical signs did not permit of arriving with certainty at the diagnosis of tuberculosis. Fluoroscopy showed that the apex of one lung was less permeable than the other, and a few days later all doubt was removed by the positive results of auscultation and bacterial tests.

A most interesting case is one of calcarious deposits in the middle and upper lobe—right side—which showed up the calcarious deposits most beautifully. Two cases of rickety thorax were examined for malformation only. Another case, in which an intubation tube slipped from its lodging place while in position during diphtheria in a boy 16 years old, and fell into the trachea, resting at the bifurcation, in a straight position. This happened during the stage of inflammatory absorption, making the resting space in the larynx larger. Fluoroscopy gave direct evidence, and the tube removed successfully. This case has already been published in connection with others of the same nature, in the International Clinics for October, 1896, The Laryngoscope, July, 1896, &c.

In diseases of the chest fluoroscopy furnishes information of equal value in every respect with that elicited by percussion and auscultation. I had also occasion during these examinations to observe two cases in which the heart was pushed out of its normal position by old pleuritic adhesions, and one case of aneurism of the aorta, which the fluoroscopic view showed and proved so by percussion and auscultation. Dr. Judson Duland, of Philadelphia, wrote me a few days ago, while busy writing up my own notes, of a case of aneurism aorta which he observed by this mode of examination. The patient died shortly afterwards. The post mortem gave the exact diagnosis as made out by him during life.

In a recent number of the Lancet, Dr. H. Campbell Thompson, under the heading "The Practical Application of the Roentgen Rays in Diseases of the Heart and Great Blood Vessels," the following history is given which I quote in full to strengthen my own allegations made as early as in May, 1896.

I showed that the size and shape of the heart could be estimated by means of the Roentgen rays and a fluorescent screen, and also that, with a little trouble, a tracing of that organ could be obtained. In order, however, that the method may

Fig. 18. Radiograph of a tube which moved out of position.

be turned to practical account in the diagnosis of disease, it is, first of all, necesary to be quite familiar with the apperances which are seen in the normal condion. When the focus tube is placed behind a *person* so that the rays pass through the thorax, a striking effect is produced; the bones are very clearly depicted, while the heart is seen as a definite shadow in contradistinction to the light area around. This light area is occupied by the lungs, which are not dense enough to stop the rays, but allow them to pass through and give rise to a fluorescent on the screen. The shadow of the heart is not uniform in intensity, being lighter at the margins than towards the center, but the outline can be clearly seen and its pulsating movements detected. The lower limit of the thorax is bounded by a dark shadow which corresponds to the diaphragm, with the liver beneath it, and the ascent and descent of the diaphragm with each respiration can be clearly seen. On taking a deep inspiration, so that the diaphragm descends to its full extent, the lower margin of the heart can be differ entiated from the liver, the descent of the latter causing an interval between the two organs; which at once shows up as a bright line. This is in itself an important point for clinical purposes, as by ordinary methods it is very difficult to map out this line, owing to the dullness of the one merging directly into that of the other. From a front view, then, the whole outline of the heart can be made out, and after a little experience, anything abnormal in shape or size can readily be detected. The back view is, if anything, more interecting than the front, from a clinical standpoint, since it is more difficult to investigate by the usual means. The ribs and vertebræ show up as they did in front, but of the heart itself much less is seen. One reason for this is that part of the heart is situated directly in front of the spinal column, and so is necessarily obscured from view, and another reason is on account of the oblique position which the heart takes up in the thorax, the base being directed stightly upwards and backwards, while the apex points downwards and forwards. On the left of the spine a definite shadow is seen, with a well marked eternal border; this corresponds to the left ventricle. To the right of the middle line a smaller shadow of less intensity appears, which chiefly corresponds to the right auricle. The appearance of the shadows will be seen in Figure 1.

In the figures the bones, which, of course, in reality appeared dark, have not been shaded, to avoid confusion and it is necessary to be quite familiar with this appearance on the screen before any thing abnormal can be detected. When taking a tracing of this back view, it is useful also, to mark in the lowest points of the angles of the scapulae, which are normally on a level with the lower border of the seventh rib. The following is a case in which examination by the rays materially assisted in making a diagnosis. A man aged 40 years was first seen in June, 1896, by Dr. A. Wheeler. He then complained of pain in the left side and also occasionally in the back which he had had since March. Shortly afterwards he was seen by Dr. Sidney Coupland who agreed with Dr. Wheeler in suspecting the possibility of an anurism. At this time the physical signs consisted of some impairment of resonance in the interscapular region, and a blowing systolic murmur was to be heard all over this region, but with its point of maximum intensity to the right of the vertebral column. The patient was informed of the probability of the presence of a deep-seated aneurism, but wishing for further corroboration, he consulted another physician, who did not think the evidence sufficient to warrant such a diagnosis being made. The case was in this doubtful position when Dr. Coupland kindly sent him to me, and we together examined him by the X rays. From the front it was noticed that the heart was a little hypertrophied, and just above the point of junction of the left border with the sternum a faint indefinite shadow was seen (Fig. 2, A), from which, however, nothing decided could be made out. On looking at the we were more successful The shadow of the heart appeared as usual, but just above it was a very definite shadow seen on both sides of the spinal column and about on a level with the fourth dorsal vertebræ (Fig. 3, A and B). On the right side border was convex and could be distinctly seen to pulsate, while its intensity was about equal to that of the heart, but, on the whole, a little lighter. On the left side the sha-

dow was only faint and its margins could not so definitely be made out. This, then was an important piece of evidence, which, added to the physical signs already obtained, removes the case from a doubtful one the nature of which is practically certain, for it can scarcely be doubted that it is a case of aneurism of the aorta, the tumor probably springing from dencending part of the arch.

I may add that, since this examination was made, a diastolic murmur has developed in addition to the syslotic one above mentioned thereby adding still more confirmatory evidence in favor of the diagnosis. Sinee the above was written, I have had an opportunity of examining two other cases of aneurism with equally satisfactory results.

It is my hope in the future to produce such photos Fluoroscopic pictures and drawings of my cases so as to make an atlas for reference, I believe that this advance will be hailed by many who wish me and others well.

A Few Points on the Management of General Radiography

Mr. Herbert B. Shallinberger gives us the following information concerning the making of Roentgen radiagraphs. His radiographs have been the most remarkable for their definition and delicate shading I have ever seen. Mr. Shallinberger says, as to the plates which are best for this purpose, that he differs in opinion from other investigators, since he has found that as between fast and slow sensitive plates, those which are rapid for ordinary photography are rapid for Roentgen ray picture and as one would naturally expect, in proportion to their sensitometer number. The M. A. Seed Dry Plate Comp, sensitometer 26x, are very excellent for the purpose.

The distance of the tube from the plate must be determined by the thickness of the object to be photographed, but should always be far enough to cause the shadow to be a little larger than the object as possible. From 12 to 14 inches between plate and tube is right for an 8x10 plate. For thicker portions of the body, such as the chest, the distance must be increased from 24 to 30 inches and the exposure must not only be made longer to suit the greater thickness of the object but also to suit the distance, as the power of the rays varies universely as the square of the distance.

Mr. Shallinberger tells us and I found it by my own experimentation to try to so time the exposure as to show the different layers of tissue, and this is best acccomplished by somewhat under exposing the plate and working it very slowly in the developer. This latter point particularly applies to Roentgen ray exposures as it was very soon discovered that the gelatin film was acted upon throughout its entire thickness, instead of on the surface only, as in ordinary photography. After placing in the tray and flooding with developer, some little time elapses before the image begins to appear, when it develops rather suddenly, and after becoming quite distinct, sinks into the film and acts much like an over exposed plate. The developer should at this point be slightly weakened and the plate, screened from the light, should be allowed to remain in it until the light from the red lamp will not penetrate through it, and a strong positive can be distinctly seen by looking at the back of the negative. This produces a plate having fine contrasts and possessing excellent printing qualities. With the ordinary photograph this treatment would produce a very harsh result, but the Roentgen picture seems to require a building up, as it were, of the entire film.

A developer composed of equal parts of "Ei Konogen" and "Hydroquinone," made according to a formula of his own, has been found by Shallenberger to be all that could be desired for this work. It admits of wider range of exposure, is readily controlled, gives a black and white negative, and deals gently with the fingers. Aside from all these advantages it may be used repeatedly if so desired, which, however, is not advisable, as one never knows what to expect from a developer which has been used and allowed to stand. It is well to retain a small amount of the spent developer, as by adding a little of it to the fresh it prevents too vigorous an action!

The making of prints from the negatives should be given fully as much attention as the negatives themselves, as otherwise the careful, patient work which has been necessary up to that point, will all have been in vain. Mr. Shallenberger says, "I long ago abandoned the old

'printing out' process, and now confine myself entirely to a process of development which is so flexible as to admit of almost any treatment of the print." The paper used in connection with this developing process should be a gelatine paper, such as ' Solio" or "Albuma."

With this amount of information ready in hand, any one with some ingenuity must be able to make his own Radiograps of such general cases of medical value.

I propose to publish under separate title special radiographs of cases of diseases of the chest wall in order to demonstrate by such pictures the accuracy of my statements and scematic drawings here representing my clinical notes.

Joint Tuberculosis.

By CHARLES W. OVIATT, M. D., Oshkosh. Wis.

Professor of Principles of Surgery and Surgical Pathology, in Milwaukee Medical College Attending Surgeon to St. Mary's Hospital and Consulting Surgeon to Alexian Brothers Hospital Oshkosh, Wis., Member of the American Medical Association, Wis. State Medical Society, etc.

In no department of surgery has there been a more marked advancement in knowledge during the last decade than in the study of bone and joint tuberculosis. A few years ago; white swellings, scrofula and other terms expressed conditions which were supposed to be due to a peculiar inheritance known as a strumous diathesis. These terms are now happily obsolete. The meagre and chaotic notions expressed by them are replaced today by clearly defined ideas of the pathologic changes characterizing this form of bone and joint affections. Microsopic study, cultivation and inoculation experiments demonstrate the bacillus discovered by Koch to be the essential etiologic factor in tubercular processes in whatever tissue found.

When we speak of a primary infection or focus in osteo-tuberculosis, we mean simply a primary localization following the entrance into the blood current of tubercle bacilli. Much more frequently, however, it is secondary to a localized focus in some other part of the body, usually the pulmonary tissue or a lymphatic gland, the bone infection being due to a minute embolus of granulation tissue containing the bacilli.

Traumatism was formerly accorded a more important role as an etiological factor in joint tuberculosis, than it is today. Where the disease is traceable to an injury, it has been shown by Volkman to be of a slight or almost insignificant character. A crushing injury or fracture is rarely or never followed by local tuberculosis.

When the disease develops before puberty, as it so commonly does, the most frequent site for localization is in an epiphysis probably because of the imperfectly formed vessels of the growing part affording a favorable lodgement and culture soil for the bacilli. Developing in adult life, in the region of a joint, it is more likely to be synovial in its origin. Developing in a bone at a point remote from a joint, a tubercular osteomyelitis is characterized by a slow process of chronic inflammation in which, as in every tubercular process, the mature fixed tissue cells are attached and converted into embryonial cells which form the granulation tissue that is ever present.

CLINICAL VARIETIES OF JOINT TUBERCULOSIS.

In his writings on the subject Dr. Senn described five distinct varieties as follows:

First.—*Pannus Hyperplastic Synovitis* in which the nodules are extremely small and widely disseminated over a large part of the joint surface. A thin vascular layer of granulations starts from the border of the cartilage and extends towards the centre of the joint.

Second.—*Tuberous or Papillomatous plastic Synovitis* forming subsynovial fibrous masses which may attain the size of a walnut and which may be taken for cases of floating cartilage. This same type of inflammation in other cases covers the synovial surface with sessile papillomatous growths which may become detached forming the so-called rice bodies.

Third.—*Granular Fungus Hyperplastic Synovitis*—"In this variety the synovial

membrane is affected throughout, being considerably thickened and hyperæmic and covered by a more or less thick layer of granulations. The ligaments and para-articular structures are affected at a comparatively early stage and thus is formed the thick, œdematous mass of tissue usually of a gelatinous appearance in which here and there cheesy foci are found." The transudation of serum, hydrops articuli may or may not take place in any of the above described varieties.

Fourth.—*Tubercular Articular Empyema.* This is a tubercular abscess within a joint, the result of an advanced stage of the disease The fluid contained in such a joint, while it has the appearance of pus, is not such, but is serum in which is held suspended the products of coagulation necrosis. After the cartilage becomes detached, extensive caries may follow.

Fifth.—*Caries Sicca.* Was first minutely described by Volkman. This variety is characterized by the abscence of the usual amount of granulation tissue; an obliterating of tbe joint cavity with sclerosis and concentric atrophy of the articular end of the bone. It is an extremely rare form of the disease, is met with more frequently in the shoulder-joint than elsewhere and often terminates in a spontaneous cure.

DIAGNOSIS.

The fact that far the greater number of cases of joint disease are tubercular should have its weight in estimating probabilities. It is hardly necessary to warn a body of modern physicians against treating a single joint affection for rheumatism for any considerable length of time. Rheumatism does not remain in one joint.

In dealing with a tubercular joint, it is a matter of greatest importance to determine whether the primary localization is osteal or synovial; that is, whether the starting point was in the epiphysis or in the joint itself. If it is osteal we will find a point of extreme tenderness on pressure corresponding to the original focus. When the disease has extended into the joint, or, when it has its origin just outside the cartilage, it may be impossible to determine this point.

Pain as a diagnostic feature is unreliable because of its variability and the well known fact that it is often remote from the focus of disease. The formation of granulation tissue is accompaneid by osteoporosis, the bone becoming soft and yielding thus accounting for the slight amount of pain sometimes present, bearing no resemblance to that which accompanies suppurative osteomelitis.

PROGNOSIS.

The variable course of bone and joint tuberculosis make it impossible to foretell the outcome. Whether in one case the bacilli are more virulent or whether there is a minimum physiologic resistance on the part of the patient we do not know. But we do know that some cases are cured spontaneously while others go on to destruction in spite of all treatment. The clinical fact has been pointed out that, where anæmia is pronounced, the progression of the disease is rapid and often quite impossible to check.

TREATMENT.

Rest has long been recognized as a potent factor in the treatment of joint tuberculosis, but, the limits of this paper will not permit taking up the application of mechanical appliances for the securing of this end. Will simply say that the careful application of plaster of Paris dressings is often superior to the costly and cumbersome orthopoedic apparatus, and, to use Sayer's word procures a "fixity" not afforded by any other means.

The injection of a sterilized 10 per cent. emulsion of iodoform in glycerine as advised by Bruns, gives ideal results in cases of primary synovial tuberculosis. For obvious reasons it is of less value when there is a remote osteal focus which has subsequently involved the joint. It is also useless in cases where a fistulous opening exists and where secondary infection with pus microbes has taken place. This simple operation should be done under the most rigid antiseptic precautions as there is no clinical fact more certain than that the granulation tissue of a tubercular depot is a most favorable soil for the development and proliferation of pus microbes. A small trocar is to be employed and a quantity not exceeding two drachms should be used for the first injection. If the joint cavity contains fluid, it should be washed out with

a weak solution of boric acid it sterilized water through the canula before the emulsion is introduced. The injection should be repeated at intervals of from four to eight days. If marked improvement does not follow the second or third injection, more will usually prove useless.

A glass syringe which will hold an ounce, a small trocar and a short piece of rubber tubing for connecting them, all of which can be boiled in soda sol, together, constitute all that is needful. In cases where the emulsion is inapplicable or inefficient we are obliged to resort to operative measures by one of three methods, viz:

Arthectomy.

Atypical excision or resection.

Typical excision or resection.

Arthectomy consists in opening the joint by one of the various incisions in use, and the removal of the synovial membrane, capsule and diseased soft parts, and is, of course, applicable only in cases where the disease is limited to these structures.

Atypical excision consists in the removal of the diseased soft parts, as in arthectomy with the removal of localized diseased bony foci by means of Volkman's spoon, chisel, etc., but without the removal of the articular cartilage by transverse section with the saw which constitutes typical excision.

Conservative surgery forbids unnecessary mutilation or the removal of a vestage of tissue that may be of future use to the patient. For this reassn, arthectomy and Atypical excision is today mueh more frequently resorted to than typical excision, which is now made use of where there is very extensive destruction of the articular ends. Typical excision is especially objectionable in children where the removal of the epiphysis would arrest the development of the bone.

For obvious anatomical reasons, atypical resection is more applicable to the knee-joint than to any other, although its use is being gradually extended to the elbow through a temporary resection of the olecranon and to the ankle by temporary resection of the malleoli. In the removal of a diseased focus, in bone, the defect, if of any considerable size, should be fitted with aseptic decalcified bone chips, according to Senn's method. They aid in procuring an ideal healing, often saving weeks or months of lime in obliterating the cavity. Their use is followed by more uniform good results in osteotuberculosis than in suppurative osteomyelitis.

In circumscribed foci occurring in epyphises or in the irregular bones, the disease can often be checked by ignipuncture. This consists in perforating the tissues to the centre of the focus with the point of the Paquelin Cautary. The tubular eschar affords drainage, relieves pain by removing the intra-osseous tension while the thermal action destroys the bacilli by actual contact and by setting up a regenerative plastic inflammation favoring restoration of the part.

In all cases of peripheral tuberculosis, general treatment and hygienic measures should not be neglected. Everything that will tend to build up and increase physiologic resistance should be made us of. Guaiacol should be given internally to the point of tolerance, and continued for months. In cases that are anæmic, iron, in some form, together with malt preparations and cod liver oil, will be found useful. From a theoretical standpoint, tuberculin should give good results. I used it quite extensively when it was first introduced, and personally have never entirely lost faith in it. In my opinion some modification of the product is destined to become a usefel method of treatment in the treatment of tuberculosis.

(Nine cases of joint tuberculocis that had been operated upon or treated by injection with iodoform emulsion, were presented to the society, as illustrating the vaious types of the disease, and the results of the operations demanded.)

The Therapeutic Value and Administration of Iron.

By Robert C. Kenner, M. D., Louisville, Ky.

It is the purpose of the writer to go over the therapeutic preparations of iron, and to give what is considered the best means of exhibiting so important a remedy. While the profession fully value iron, there is no doubt that failure to obtain the results which this agent is capable of rendering is often not obtained, because a preparation is employed which

is not readily assimilated. When taken into the mouth the soluble preparations of iron it exerts an astringent effect. Iron as is well known is one of the proximate principles of the economy and is an essential part of the food. A great many of the ordinary preparations produce constipation. Iron is a tonic which exerts a marked influence in the nerve centers, but the good results which we obtain from it are attributed to the improvement it makes in nutrition. In anæmia it increases the number of capsules in anæmia, and is therefore considered a specific for that affection. The Hemoglobin of the blood under its use is brought up to the healthy standard under its use. By the improvement in the quality of the blood, the heart's action becomes better, and anæmic patients who before its administration suffered with palpitation, and frequent attacks of syncope, soon lose these symptoms, after getting under its influence. The stomach is usually stimulated and the appetite is improved, when a pure non-irritating preparation is exhibited. Binz says "The contact of the latter (iron) with the mucous membrane, causes a certain amount of constipation. If a solution of iron be injected into the blood of an animal, the metal soon appears in abundance as albuminate on such secreting surfaces as generally pour out albuminate secretion. The reason of this is the blood corpuscles in every part of the body assimilated the albuminate of iron. if its particles be sufficiently minute.

Nothing in this article will be said of the septic properties, it being the writer's intention to deal with the agent only as a remedy for internal use. The field in which iron is employed with greatest confidence is where we have anæmia—and it is said as above a specific for this affection when it is given in a form acceptable and easily assimulable. In chlorosis which is of course another form of anæmia it is also given with excellent results. Fothergill lays down this rule as one indication for the exhibition of iron "When the tongue is dry and red iron always disagrees and should not be ordered. On the other hand, a pale broad and flabby tongue marked by the impression of the teeth is especially indicative of the demand of the system for iron" (Shoemaker).

In amenorrhœa iron is given with decided benefit and it effects in cases of this trouble due to anæmia, the action of the remedy can be well understood. To get the best results from the remedy it must not only be given in appropriate form but regularly. This point is especially mentioned because many cases where the action of iron is not seen after the drug has been taken for a time is due to the fact that the iron has not been faithfully taken by the patient. In Chlorotic girls this is often the case and the practitioner must endeavor to get the parents of the patient to aid him in this way. In the treatment of enlarged spleen due primarily to the action of malaria, the effect of iron is generally most beneficial—probably because it overcomes the anæmia usually associated. In the treatment of neuralgia iron will come in for employment in a great many cases, since that effection very often results from anæmia. In persons subject to attacks of articular rheumatism and muscular, we often find great improvement after a course of iron. In Syphilis it is often given with much benefit especially when anæmia is a marked feature. In gonorrhœal rheumatism it is claimed by some writers to be the best remedy at our command. It may be said in a general way that iron is indicated in pure anæmia, and in all other affections in which that condition is a factor and it is therefore not worth the while to continue a catalogue of affections in which this agent from its therapeutic action is manifestly indicated. To administer iron properly is of a degree of importance which we cannot overestimate. The giving of the old tinctures of the chloride is open to many objections. That preparation is very disagreeable to palate, and often produces gastric disturbance constipation, and other diseases, is a well known fact. This and other preparations are not depended on by the general profession because they are not readily absorbed. The albuminate of iron is considered by the ablest men in the profession as the most available preparation, as it is readily absorbed, and we can depend upon it to produce the best results. Lig. Ferri Albuminati (Drees) is a common form of prescribing it. This remedy is prepared with extreme care, and it does not prove disappointing

as is too often the case with this class of remedies.

The Study of Medicine in Europe. Benefits which the American Derives Therefrom.

By Leon L. Solomon: A. B., M. D., Assistant in Chemis ry and Clinical Assistant, Department of Pediatrics, Kentucky School of Medicine: Curator Louisville City Hospital: Lecturer on Materia Medica, Louisville Training School for Nurses.

Nowadays when so many American medical men are each year going to Europe to complete their studies, or to prepare themselves in some special line of work, it will probably be acceptable to the reader, who has in view a prospective trip, to hear a report from one, who has lately spent some time in European Universities and Hospitals. Those who are about to set sail for Europe are apt to ask themselves the question, where shall I go? What country shall I visit and what city should be my objective point? Without doubt, Germany stands preeminently at the head today as a medical center, and with her long array of professional talent, is calculated to hold prestige for some time to come. No other country approaches her, because none have so many excellent and famous institutions, as has Germany.

Vienna, Paris, London, each possess wonderful advantages and magnificent institutions for medical learning, but these are individual cities and stand out, as a rule, in bold contrast to other cities, in their respective countries, where no decided advantages are found.

With Germany, this is not the case. She not only has her Universities and countless Hospitals and Clinics in Berlin, which is now a city of almost two million people, but there are the University towns of Heidelberg, Würzburg, Strassburg, Bonn, Marburg, Königsberg, Munich, (München) Breslau, Göttingen, Halle, Greifswald, Kiel, Freiburg, Erlanger, Giessen, Leipzig, Jena, Rostock, Tübingen. All of these support excellent Universities and all have large Hospital facilities, which draw their patronage from the city, in which they are situate, and from the surrounding country at large; and when I speak of Hospitals, the idea of a well equipped institution is always understood. Oftentimes, the building proper is old and its appearance unattractive, but, once within its walls, and there is found everything which is useful, in solving the mysteries of disease, and making out an exact diagnosis. The comforts of the patients, except in private institutions are, as a rule, not materially cared for. The one and sole aim seems to be, to make the diagnosis; even treatment is regarded as a decided secondary matter. Each Hospital prides itself upon its Laboratories, and, I might say, in a marked degree, upon its "*dead house.*" The royal government lends a protecting hand and the hospital never wants for scientific apparatus and working paraphernalia. Coupled with this, comes the German patient who, accustomed to being ruled, accustomed to army disc pline and subjection, makes a very desirable subject for medical attention.

The professor, clothed with his many titles, backed by the arm of the government, and conscious of his own worth and the position which he occupies, is very exacting. Whatever he orders, brings not a murmur from the patient, and finds ready execution at the hands of his assistants. The patient seems to be in the hospital as much for the light which his case will throw on medical science and skill as for the cure which he, of course, fondly hopes for. As for the University, proper, it is all you could expect it to be. There is only one University in a city (Berlin has only the one) and the very best professional element attainable, is found in this University. Berlin is the elective point, where, no doubt, all professors, with any great ambition, hope some day to be called, and with few exceptions, only true merit is considered in calling any man, from a smaller university, to the great "*Friedrich-Wilhelm Universitæt zu Berlin.*" However, this fact does not preclude the possibility of having very excellent professional element at any and all of these smaller universities. Indeed, it rather stimulates the members of the various faculties, who compose the smaller universities, to put forth their best efforts towards achieving success and finally placing themselves on the available list

for possible early promotion. König, than whom there is no greater surgeon and educator in the medical profession—a man, who has written, probably, the best book on surgery and surgical pathology, occupied the chair of surgery in the small town of Göttingen until, at the death of von Bardeleben, in September, 1895, he was called to Berlin. So Czerny, who has grown so famous in Germany, as well as all over the civilized world, and especially famous in the United States, has long occupied the chair of surgery in Heidelberg. When Billroth died, Czerny was asked to come to Vienna, in fact was begged to come and take the great Billroth's place. He modestly declined, much to the gratification of his own large clientele, in the provinces of Rhine Hessen and Rhine Bavaria. And so it is in each of the smaller universities. They all support excellent faculties, and the individual men enjoy, oftentimes, national and international reputations. Prof. Röntgen, the discoverer of the X Ray, is located in the small town of Würzburg, where he has for some time been a member of this famous old university's faculty.

A question of considerable moment to those, who are about to visit Europe, is the language. It is really surprising how quickly the American learns German. In a few weeks, he is understanding sufficient to get along with the lectures, and while he continues for a long time to make grammatical errors, and to transpose the order of things, in his conversation, at the same time, he is soon making a brave effort to speak, and before one would think possible, he is conversing fairly well.

To accomplish this result, and do it quickly and well, it is desirable to go to one of the smaller universities, where no English is spoken, and where it is absolutely necessary to talk German. In the larger cities, not only does one meet a great many of his own countrymen, to whom he, naturally, talks in English, but there are so many private courses to be had by men, who talk English (as a rule, poorly,) that we are the worse for too much English conversation, at the expense of our German. It was my custom to fight shy of Americans and English, and court the friendship of German students and associates. You might ask: is this easily accomplished? I answer, very easily. The American is admired by the German and finds ready "*entree*" to German society, if he will but make the attempt. Besides, the courses given in English are never so good, as those delivered in German. Imagine some professor or assistant, here at home, who speaks a fairly good German, undertaking to deliver a lecture in that language. All will agree with me, it would most likely be poor, and so it is with the English lectures and English private courses to be had in Germany or Austria.

Again, by such a procedure, we thwart one of the first reasons, for a course in Germany, and at once do away with a great benefit to be derived from a sojourn in a country, where German is the language. I refer to the mastering of sufficient German, to be able to speak the language, to write it, and to read it quickly and understandingly; in short to be able to think in the language. Before we can truly say this state has been reached, it is necessary that we be able to read a language and although not translating it verbally, yet get the full, clear meaning of the theme, and the sense of the text, without stopping to transpose or translate. It is especially easy to master medical German, since the Latin words and Latin endings are the same, as in English, and the German professor makes a large use of technical terms and phrases, in his ordinary conversation. I should advise, then, that the American go immediately to one of the smaller university towns, and stay through one or two sessions, or so-called "*semesters.*" He will, in this time, learn the language sufficiently well, to understand everything, and to talk fairly well, and, if he has applied himself closely, will be able to read and write in German.

Have no fears that you will not be interested and that your time might be better spent in a larger centre. You will soon find that there is an abundance of working material, in every department, and the way this material is handled, is thoroughly satisfactory and pleasing to the American. It must be said of the German, that whatever he does, is well done. He is, as a rule, slow, at times, painfully slow and tedious, but he is *sure*. The execution of each of his duties is characterized by that same care and painstaking, which has long been recognized as a trait of German

character, and which, no doubt, explains the genuine success of the Germans.

If it is in Theory and Practice of Medicine, we are at once struck first, by the number of clinical cases, which are shown; second, by the choice of cases exhibited; third, by the thorough examination, to which each patient is subjected. It is, indeed, a pleasure to watch an examination. A full personal and family history has been obtained, and is read or recited by an assistant. This ended and there begins an inspection of the patient, who is stripped and carefully inspected from head to toe. Everything found is noted, whether it would seem to have any bearing on the case or not. I have often heard Prof. Senator criticise the student or assistant severely; when he had failed to note some trivial skin lesion, or probably an unimportant birth mark. Now begins the physical exploration of the chest and abdomen. Each organ is carefully examined, the various methods of physical diagnosis, at our disposal, being exhausted before this examination is considered complete. As a rule, this work is done by the professor who emphasizes each point, as it is elicited. The report of the examination of urine, sputum, blood, and often the vomit, (or gastric contents obtained by aspiration) and fæces is made by an assistant, whose special duty it is to examine these products, and if anything noteworthy was found, various test tubes and microscopes at hand, show it. Another assistant reports on the "Ear, Nose, and Throat," and another on the Eye. The nervous system and muscles are also examined- This includes not only a test of the various reflexes, but a consideration of the motor and sensory apparatus, and a due regard for the brain. Nor, are the skin, hair, teeth, and nails neglected. Every portion of the body—every muscle and every organ is questioned, and the results are tabulated, preparatory to the final making of the diagnosis.

With this great abundance of knowledge of the case, before the lecturer the diagnosis is arrived at, and treatment instituted. As I stated, the treatment is a secondary consideration, with the Germans. They exhaust every avenue, that the nature of the malady may be solved, and are then quite satisfied to let the therapy take care of itself. In common-sense procedures, and in what Sir Frederick Roberts terms "*the general management of the case*," the American learns good and useful points in Germany; but, on the whole, he is disappointed in German Therapeutics, and is often heard to declare that "we American Doctors are better Therapeuticians than are you Germans."

It is especially, in careful examinations, and in the great numbers of clinical cases, that the American is made to feel an interest. I recall von Krafft Ebing's Clinic and the lectures on Locomotor Ataxia, when he exhibited, day after day, for over a week, from fifteen to twenty cases. These cases are kept track of, and when the professor is ready to lecture on this subject, they are all informed, by postal card, and it is rare that a single one, who is able to come, fails to appear. Many are sent for in carriages, others come willingly on foot to this man, whom they all dearly love, and who, of all men, is one of the gentlest with patients, poor as well as rich. So in surgery, the clinics are large and good. A difference is made in Germany between the surgeon (chirurg) and the brilliant operator, (Operateur). König is an example of the first class, and von Bergman, of the latter. The former is a careful, slow, painstaking surgeon, who, in the ampitheater, is a plain, deliberate, clear talker, while von Bergman is the bold, dashing operator, who accomplishes one great feat, and keeps you guessing what he will do next. His assistants work together, like an intricate, yet perfect piece of machinery, and prove, at once, that they have learned the military discipline of the great army surgeon who is their chief. He is unfortunately, however, very indistinct in his delivery. But it is in the Laboratory, that the real, good work is to be done. Here the German far excels all others. No country can, at once, boast of a Virchow and a Koch; of a Loeffler and a Behring. Germany has all four and many others, who, although not so famous, are none the less qualified as teachers.

I have pictured the laboratories as small and dingy. This is a fact, yet the good results, obtained in them, cannot be disputed. Here, the American can learn a faultless technique, and, under a skillful instructor, who knows his branch

thoroughly, can master the truths of Bacteriology, Pathology, Histology, Chemistry, and other allied studies. If he desires, he can do various specialties in these laboratories. He can study the pathology of the Nervous System, or he can make an especial study of blood, or of Gastric Analysis. He can get any kind of Histology or Anatomy desired, or he can devote his time to sputum, urine, fæces, etc. Everything is to be had in these departments.

One thing impresses all of us, who do Laboratory work in Germany, and that is, that the German is not wasteful and will not permit any one else to be wasteful. The bits of alcohol used in dehydrating tissues and for various other purposes, after having served their function are carefully gathered together, redistilled and purified, or burnt in the spirit lamp afterwards (without distillation) and never thrown away. The bunsen burner used, is a small, abbreviated affair, and is a gas saver. A card, posted conspicuously, warns you that you will be charged or fined for wasting gas or any other working agent or utensil.

Having finished one or two semesters in a small university (each semester lasts 3¾ to 4½ months and there are two per year) you will be ready to go to a larger city. It matters very little whether these two sessions are spent in Marburg Heidelberg, Würzburg, or in any other of the smaller universities, one is about as good as the other, as you will have spent your time well. Now where shall you go? To Berlin or to Vienna? I am aware that the majority of Americans have a preference for Vienna, and they argue that the many Americans, who yearly congregate in this city, have at least, educated those, who give private courses, to the wants of Americans. This is surely true and, as a rule, these courses are all good. One decided advantage over Berlin is the fact, that everything is centralized in one institution "Das Algemeine Krankenhaus" and here a man finds any class of work, he may desire.

Noteworthy among the advontages of Vienna are Kolisko's course in gross pathology, and Albrecht's in microscopic Pathology—both held in the Patho logical Institute adjoining the Hospital. These courses are especially intended for Americans. Then, there is Kaposi on the Skin, Neuman on Syphilis. there is Politzer on the Ear, and Monti in Diseases of Children. Nothnagel and Neusser are both very fine in Internal Medicine, and Albert is a great surgeon. Neudörfer, who, until recently, was assistant to Neusser, conducts courses in Urine Analysis, Sputum analysis, Blood analysis, which are especially instructive. Nine tenths of his pupils are Americans.

Of the clinical assistants, in "Internal" Medicine, and by this term is meant Theory and Practice, my preference is for Ortner. But with all these advantages, save for gross Pathology; under Kolisko, and the fact that Berlin's Hospitals are scattered, necessitating much loss of time, in going from place to place, I prefer Berlin to Vienna, There is such a difference between the Berliner and the American and so little, at times of difference between the Wienner and the American that I could not learn to like the latter people. Both of us seem to be too nearly alike electrically—both of us were electro-positive and our forces were repellant while the German is electro negative and there was mutual attraction.

There are not so many courses, especially adapted to Americans, in Berlin but there is always an abundance of good work to be had. To begin with, you can, during the regular sessions, Nov. 1 to March 15, and April 1 to July 1, hear every day, except Saturday, three clinical lectures on Practice of Medicine and by three eminent men.

There is Gerhardt, Senator and Leyden —all men of the greatest knowledge and skill. They each have a separate department, in the Charité Hospital and each has a coterie of trained assistants, of more than ordinary ability. Indeed, Gravitz, who is first assistant to Gerhardt, is already a famous man, while Klemperer, Leyden's chief assistant, is too well known on this side of the water, to require any praise from me.

In Gynaecology and Obstetrics, there are two shining lights, in the personages of Gusserow and Olshausen. I saw four cases of Puerperal Eclampsia in "Olshausen's Frauen Clinic," one morning. In Pediatrics, the University has Heubner and Baginsky. Koenig, von Bergman, Nasse are three eminent surgeons.

Lassar is well enough known and appreciated, as a skin specialist. Mendel and Jolly, both famous in nervous diseases and psychiatrie. Hanseman, Langerhans, Virchow, Israel—the world's greatest pathologists. Besides these, are hundreds of others, who are more or less famous. There is, for instance, Max Joseph, who gives the best course in clinical skin diseases to be had anywhere, and a microscopical skin course, which is correspondingly good. Then there are Martin and Dührssen and Czempin, who gives fine courses in minor and major gynaecology. There are Ewald and Boas and Rosenheim, whose courses in stomach and intestinal affections, can not be excelled—each is the author of a standard text-book.

After the semester courses there is a so-called "Ferien" (or vacation) course for advanced students and post graduates. These courses last four weeks and are largely patronized by medical men, from all over Europe as well as America. As a rule the "*Vienna*" Americans always run up to Berlin for the Ferein. The Spring Ferein begins March 1, and the Fall Ferein on Sept. 30, or about that date. I have, I think, said enough about a course in medicine, abroad, to prove my assertion that many benefits are to be derived therefrom. Just one word more, before I have finished.

All who study in Germany are struck with the fact, that the didactic lecture has almost been done away with. I don't think I heard a half-dozen didactic lectures while in Berlin. Every disease is illustrated by a clinical case, or better-said by a series of cases.

The term is five years—two sessions each year, or ten sessions of lectures, and I learn, that in Vienna, two addition al years are spoken of, if indeed, they have not already been added. The standard is a high one, and the preparatory work, before you are permitted to take up the study of medicine, must embrace a liberal education in a "Gynasium," which is equivalent to our high school training here at home.

323 W. Walnut Street.

Tuberculosis.

Dr. T. A. Casey, of Albertville, Ala., contributes an article on this subject to the Alabama Medical and Surgical Age. In this article we have the following quotation: "Tuberculosis is a curable disease."

As to the mortality of the disease the following statistics are given:

In the year 1890 there were 125,000 deaths from tuberculosis in the United States, and in 1894 there were 1,119 deaths from pulmonary phthisis in Alabama. The disease is almost unknown to savage life.

In discussing the etiological factors, the author asked: "Is Koch's bacillus the sole cause of the disease?"

Upon this point eminent authorities is arrayed on both sides. Whittaker says that it is only a question of dosage, and that there is no predisposition peculiar to phthisis. On the other hand Cohen says that condition which makes the human tissues a receptive "soil," a favorable "culture medium" for the tubercular bacillus, is itself a disease, a departure from the norm.

Reference is made to the fact that almost all the human family is exposed to the bacillus, and the position is taken that a suitable soil is a very important factor in the causation of the disease, since Koch and others found the bacilli present for a number of years in the sputa of those who were apparently healthy.

The author says that too much importance has been attached to the hereditary transmission of the disease, and claims that the term pebrine of the human race is not appropriate in this case. The apparent hereditary transmission of the disease is accounted for by hereditary or acquired vices, coupled with direct infection.

The very important fact that tuberculosis is often transmitted from the husband to the wife is mentioned in this paper, but for obvious reasons the husband is not so liable to become infected if the wife be the subject of tuberculosis.

Great stress is laid on prophylaxis. This is, according to the author, the secret of success; and with this end in view a proper disposition of the sputa is a very important measure. Specific medication is mentioned only to be condemned.

Koch's tuberculin would render guinea pigs immune, but when experimented with upon man it proved to be a signal failure, and in many cases hastening the fatal issue.

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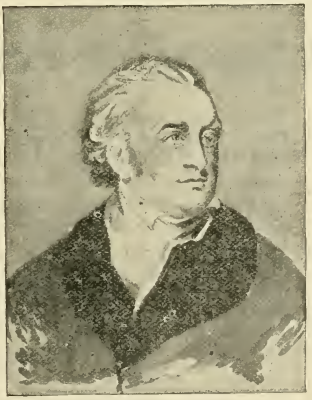

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NORTH CAROLINA BOARD OF HEALTH.

For sometime past we have had a determination to endorse the work of the North Carolina Board of Health, and have failed to do so only from a lack of time or opportunity and not from want of inclination. We are convinced that this body is doing valuable educational work both in the laity and the profession in the issue of their monthly bulletins. Each issue of this publication possesses an important contribution upon a sanitary subject, besides the data furnished from the counties of the State by the several Superintendents of Health. This keeps the profession of the State in touch with each other, and the absence or prevalence of all forms of infectious disease is accurately presented each month for study and inspection. We are satisfied that this kind of investigation will eventually be the source of valuable historical data in the propagation and spread of disease in our State. We have said this in approval of the work and purposes of the Board. We wish them the success that will always come to enlightened progressive work along this line.

MEDICAL SOCIETIES.

The medical society season is near at hand. We refer to the meetings of the State and National medical societies. With comparatively few exceptions, these meetings are held in April, May and June. Recently many editorials have appeared, commenting upon the scientific aspect of these organizations. Many hold that such associations are only of value to secure medical legislation. This is, however, an extreme view. True, such societies should consider questions of medical legislation, but this should not be made a prime object of these meetings. If necessary, one session of the society might be set apart for the consideration of matters pertaining to medical legislation, but the entire meeting should not be devoted to this purpose. The scientific value of these meetings is determined largely by two factors, i. e., first, the requirements for membership; and, second, the extent to which discussion will be permitted. Both these factors are recognized in local societies and are just as important in the state and national societies. As to the first factor, one prefers to offer the best production of his brain to a society composed of the best material possible. And when one does read a paper before a society, the greatest compliment he can receive is a full and free discussion of the subject he presents. The scientific value of the proceedings would be further added to if the discussion of at least all important subjects were opened by gentlemen specially selected from the membership of the society, who had been given ample time for preparation. This would greatly reduce useless wrangles and worthless remarks, and thus permit more thorough consideration of the subjects up for discussion.

LAUNCHING A LIFEBOAT.

A measure is now pending before the Ohio Legislature which forbids the general distribution of pamphlets, circulars and other advertisements of venders of patent medicines, in which symptoms of diseases are described. It is well understood by medical men that a sick man is not, strictly speaking, a sane man. If this be true then he scarcely or ever uses good judgment about himself while he is suffering. This condition of mind, varying as it does from the normal in disease, accounts for the strange inconsistencies of the sick and we can see why a patient, in his unbalanced mental state, leaves an educated, honest, regular physician and patronizes camp followers and scoundrels, so commonly found in a new country like the United States.

If a sick man is not a responsible being then a guardian should be placed over his actions until he is well.

If all patent medicines, their manufac-

turers, venders and the fiery serpents who emblazon newspaper columns with their lying testimonials and vile advertisements were cast into the sea, the regular physician and nurse, as well as the undertaker, would have less to do.

This measure should become a law in Ohio and all her sister States in the interest of public health. It should become a law in the interest of public economy, thus saving millions now squandered by irresponsible beings. Last, but not least, it should become a law in the interest of public morals, which are now being trodden under foot by this monster octopus.

RESPONSIBILITY OF PHYSICIANS IN ACCIDENT CASES.

There is usually such great responsibility placed upon the physician in cases of accidental injury, and I include under this head results of street and bar room pugilism, that a word might not be out of place concerning it.

When a man falls from a car, or is injured in the street by some passing vehicles or in some other way where there is a second party responsible, there is at once a crowd of sympathizing idlers and curiosity seekers gathered around him. Some one in the crowd at once asks where a physician can be found and as a rule there are several who have their favorites among the medical profession and each goes to bring his man at once. As a result several arrive about the same time and they find a man, nine times out of ten, complaining of a great deal more than he is suffering from. He is probably removed to your office and you spend from one to three hours in looking him over and informing curosity seekers and newspaper reporters that he has some superficial contusions and that he may or may not have serious internal injuries. Finally you have to assist him into a carriage as his *friends* have now all gone and he fears it would not be well for him to walk home for he is already arranging the preliminaries for a damage suit. He asks you to call and you do so. He goes to bed and complains terribly of imaginary pains that ought to mean something but they don't and you keep calling and insisting on his getting up. Finally he is up with a drawn, pale face and you suggest to him the advisability of settling his account. Then he shows symptoms of rage and says he will make the other fellow, company, or what ever it is pay it.

To make a long story short you attend him, you attend court several times and are there subjected to all sorts of questions and finally you wind up the whole affair with nothing except worry and loss of time.

The man who drinks and gets a severe scalp wound from a fall or in a fight as a result is even worse. Here the patients countenance is bespattered with blood and is truly an object of pity in the eyes of the public, but your experience is the same including attendance at court.

Where and what is the remedy, or is there any, except in large cities where dispensaries and hospitals take nearly all such cases?

Should you refuse to go when called you are censured. Should you respond to the call not knowing its character as is often the case and then refuse to give your valuable time for nothing you are doubly censured, and the reporters and public dont forget it either as soon as they could to pay their own bill.

WHEN TO BEGIN THE TREATMENT OF SYPHILIS.

It does not seem necessary to give a warning word against the beginning of the treatment of a disease before that disease is contracted, and yet as regular syphilis it would appear so. That patients have been treated for syphilis who never had it is beyond question. Many cases of chancroids, and some even with simple herpes, are required to undergo a mercurial course to their detriment.

There are two factors that influence the well meaning and honorable physician in beginning his antisyphilitic treatment before a diagnosis can be or is made positively. One is the intense and almost frantic desire on the part of the patient to enter upon a course of treatment at once that will effectually prevent any secondary eruption, which to himself would be hideous, and to his family and friends an open book of his infamy. We do not blame him for this, and we say laudable praises to the physician who

enters the arena to combat the monster with all his power at the proper time, but here comes in the other factor. Are we always strong enough to withstand the desires of the patient and withhold treatment where there is yet a possible doubt; or do we yield with the idea that it may be syphilis, and if not the treatment will do but little harm; and that if we do not treat him some one else will?

Let us be absolutely sure that we have a case of syphilis before we administer treatment for it. If the sore is not a typical Hunterian chancre, and there are but few typical ones, wait for secondary manifestations. "Some one else" will take these patients from us at times, most always the unscrupulous quack, but sometimes the honorable physician is led to believe as the patient does.

The great danger to these patients themselves is not so much from the treatment they get if they do not have syphilis but from the lack of proper treatment when they do in the future prove to have had it. When not sure of the diagnosis and nothing appears to confirm it, because the symptoms have been masked by treatment, it is soon withheld and the patient goes his way rejoicing. His troubles then most surely lie before him for of all cases of syphilis of the nervous system, and in fact all tertiary lesions, those with insufficient early treatment are pre-eminently the victims.

EMPIRICAL AND SCIENTIFIC THERAPY.

There is a phase of modern thought in medicine which deserves some consideration for purposes of precision in thought. It is the contrast which is so frequently drawn between what is characterized as empirical and scientific facts. There is a distinct tendency among writers to disparage the former in comparison to the latter class of knowledge. The intense pursuit and scientific spirit of the times has obscured a clear conception of the historical and genetic limitations which allies the medicine of the present to that of the past. It is highly proper to seek for a scientific basis for knowledge in relation to details of therapeusis, but this must not delude us into the belief that we possess at this time anything approaching a scientific knowledge of anything in this field.

We are not at present in possession of a real and complete knowledge of a single drug in so far as to how or why it induces a particular or general therapeutic change in the organism. We are in absolute ignorance of the actual mechanism of the effects of drugs, and one and all of them is administered from a purely empirical standpoint—that is from the standpoint of experience alone. This statement does not exclude the idea that we do possess numerous theories of the actions of certain drugs, or that we give them in accordance with these theories, it assumes that we possess no knowledge in the proper meaning of the word, of the action of drugs. We give them regardless of this lack of knowledge simply from the fact that they have been given through the ages, and apparently with the desired results.

With a few exceptions the really useful drugs now employed have been employed from time immemorial. Some of the most valuable ones going back to the Egyptians, Hebrews, and other ancient people. They were in the past as they are given now, solely from the fact that they do good, as shown from experience. In this way all substances, natural or produced artificially, have been tried, tested, preserved or abandoned as the experience appeared to warrant. There has been in this way a survival of the fittest in drugs as in the other departments of development. In all this vast experience of the ages we have accumulated empirical data, and the attempt to rationalize any part of it has been so far signally barren of success. The demands of speculation and science remain unanswered, though the practical purposes of therapeutics are served.

It is very easy to frame a theory of the action of a drug, and it is easy to extend this theory to the nature of the disease in which the drug does good, at the same time to ignore the many possible ways in which the effect may be produced, and so to build from a small and uncertain foundation an edifice of beautiful structure which advancing knowledge will ere long reduce to ruins. The lesson to be drawn from this is that we must limit our researches to what is immediately of import, to rest peacefully in profound ignorance

of many things and to disquiet ourselves only concerning those which are of real importance to all.

THE BICYCLE SEAT.

The bicycle as a whole has been much talked of and much written about as to its beneficial and injurious effects upon men and women, but really the only part of the wheel, when used within bounds, that may prove injurious has been practically left out. The saddle is the one part of the wheel that is of greatest importance to all riders, whether male or female. They are rarely ever made to sit on, but to straddle and swing on after the fashion of the classical fence rail riding.

Untold injury comes from the use of the narrow hard saddles that are so much in general use both by men and women and their production and recommendation by the makers is to be greatly deprecated.

These saddles have compelled many to give up the wheel, not experienced riders, perhaps, but those who are just beginning to ride. They find that something is wrong, and do not stop to ascertain the cause or to learn whether it can be remedied, but discard the whole thing entirely.

Good, safe saddles that will not allow pressure upon the perineal region are difficult to find, although there are some, hence an excellent means of regaining or retaining health and vigor is practically denied to many. The dire influence of the so-called saddle is very far reaching, and should more care not be taken by the makers and the agents who make selections from the market for their stock there will be a wave of dissatisfaction with the bicycle which may injure very much the trade, and deprive thousands of the benefit and pleasure to be derived rom an occasional spin on the wheel.

THE SPITTING NUISANCE.

The medical world has pronounced Americans a nation of dyspeptics. Charles Dickens has designated us "a nation of spitters. The former condition, no doubt, largely exists on account of the latter. Starch indigestion is especially common. Spitting (except in diseases, and especially of the respiratory tract) is unnecessary, unphysiological and at best a public nuisance. Healthy animal fluids, after being ejected from the body rapidly decompose and vitiate the air. The nose —not the mouth—is the respiratory channel and air strainer. The enlightened nations of Europe regard spitting on floors and sidewalks as not only unsanitary but an evidence of ill breeding as well. If women can get along without spitting or expectorating on floors or sidewalks, man, who *claims* to be her superior, ought to exercise enough of self control to avoid it also.

If laws against spitting in public conveyances are not enacted and enforced in the near future in the cities and larger towns of the United States, the street cars at least will lose the patronage of the cleaner and better class of people, because of the unsanitary condition of the cars, and the private electric or compressed air motor carriage will crowd the streets, delaying rather than accelerating street car travel.

About twenty five diseases may be disseminated by either moist sputum contact or dried sputum in the air. The most important of these, on account of their frequency and danger, are scarlatinæ, diphtheria, and tuberculosis. One person in every 125 is daily expectorating tubercle bacilli. Taking one-fourth of Dr. Biggs' fiiures for the city of New York, we have for the very lowest estimate 25,000 cases of tubercular infection, and 15,000 deaths annually in this country, due *directly* to the failure to safely dispose of sputum. If smallpox, Asiactic cholera or the bubonic plague, caused one half this suffering and death, the nation would be panic stricken. On account of tuberculosis being a slowly acting scourge, we spend millions for cure, mites only in prevention. How long will the legislator lie supinely on his back hugging the delusive phantom of hope while preventable disease is devastating the homes in his commonwealth?

CONCISE EXPLANATORY TITLES FOR MEDICAL PAPERS.

Notwithstanding the fact that much has been said and written in regard to this phase of medical journalism, many authors persist in concealing their articles

under catchy and elusive headings. If anyone will look through almost any medical journal, he will note such titles as—"A Rare Case," "A Unique Case," "A New Treatment for Consumption," "A New Instrument," etc., etc. Many an article under such a caption undoubtedly deserves attention from other writers but physicians who are limited in their hours for literary work, must necessarily confine themselves to those articles which will be of most benefit to them, and they cannot spare the time to look up the contents of an article under such title as mentioned above in order to see if it might be of interest to their work.

Then too, suppose a paper upon a certain subject is being prepared, much collateral reading must be done; many indices consulted for literature pertaining to it and libraries searched for information. An article possibly of great value to this paper, will, in nine cases out of ten, be passed unnoticed if it is headed by an irrelative title. Thus the writer is not only deprived of the benefit of reviews and quotations by others but also the reader is deprived of the benefit of this man's observations and investigations, incurring a two-fold loss. How much more clear and concise to say, for instance,—"A Self-Retaining Retractor" than "A New Instrument," or "Piperidin Guiacolate in the Treatment of Consumption," than "A New Treatment of Consumption." Such illustrations could be multiplied but these will suffice to direct the attention of the thoughtful readers of this article to the benefits to be derived from such a method in writing. These remarks apply withe qual force to the use of the names of anyone having priority in describing or publishing new diseases, operations, and discoveries in the realms of medicine.

MEDICAL PROGRESS.

We live in an age of progression. At no period in the history of medicine have great scientific discoveries followed each other in such rapid succession. No previous period has been so full of promise for the future as the present. It required more than two centuries to crystalize the theory that certain diseases (notably the "Great Plagues") were "caused by a germ which floats through the air," into the discovery of the Klebs-Loffler, the Koch-Eberth, and a few other organisms which we now have good reason to believe cause diphtheria, typhoid fever, cholera, etc.; but it required less than two decades after these discoveries were made to produce an antitoxine which (whatever its value as a curative agent may be) undoubtedly exerts some influence over the disease.

The Bubonic plague, which is devastating India, raged with unbridled fury and in an account of its ravages, a great medical Journal published a statement that it had resisted all efforts at control, but before the ink was dry, another announcement was made that a disciple of Pasteur had made himself absolute Master of this awful malady.

Our ears are deafened with the heralding of wonderful discoveries and the times may well be said to be pregnant with mighty events and no one can tell what a day or an hour may bring forth. Thus far the labors and the honours have been in the hands of the bacteriologists but their discoveries must now be submitted to the court of final jurisdiction—the general practitioner, and by the verdict that is rendered they must stand or fall. If the antitoxines are found to give a lower death-rate than other methods of treatment and they are not in themselves too dangerous to life, they will stand. If they are proved to be deleterious to man they will sink into oblivion and will be remembered only for the few awful deaths they have caused.

That some of the discoveries of the bacteriologist will be of value in preserving the health and life of the people cannot be doubted. The great discovery of Pfeiffer and Widal of the reaction of the blood and other fluids taken from the victims of cholera, diphtheria, and typhoid fever, upon the bacilli of these diseases, which has made a positive and exact diagnosis of them possible to every intelligent physician, will result in the elimination of much of the impericism which has heretofore so largely dominat- the treatment of certain diseases. A further result let us hope, will be the transfer of therapeutics from among the least to a position among the most exact sciences pertaining to medicine.

NEURASTHENIA.

Neurasthenia is divisible into two forms, namely, toxic and exhaustive. The toxic neurasthenia and concomitants of imperfect and perverted metabolism is not the neurasthenia of phosphaturia when the nerve tissues while rapidly disintegrating do not build up with their accustomed celerity. In the first form we have excessive and perverted tissue change, in the other excessive nervous metabolism and defective nervous anabolism as the consequence of defective assimilation of nutriment by the nerves themselves. The nerves may retain the products of their own waste in their own substance which in itself will produce imperfect anabolic and functional action, disorder the trophic agencies and in turn interfere with other functions remotely connected. In this may a vicious circle of nutrition is originated the consequences of which are incalculable. The therapy of these two forms of neurasthenia will necessarily be widely different. In that form where there is an excessive accumulation of waste products in the tissue in general we should employ eliminatives. Many cases of this type are associated with perverted conditions of the digestive apparatus and the food substances are not properly prepared prior to their absorption into the vascular tissue. In addition there are numerous toxic substances of microbic origin which enter the system through the digestive tract and produce various forms of neurasthenic phenomena. An adequate therapy must take into account both of these factors. In the other form which may be designed as neurasthenia proper, where there is not only a rapid disintegration of nerve tissues but also a failure to build up the nerve cells we should resort to rest, food and restoratives of all forms. In a number of instances we may be able to decide in which class to place a patient when the diagnosis of neurasthenia has been made. There are a few who are apparently affected with both forms yet these may be differentiated through an examination of urine. In toxic neurasthenia we have the urates, uric acid and their congeners in excess, whereas in neurasthenia of the purely nervous type we have phosphaturia. The urine in these cases is the deciding factor. The initial factors in the establishment of neurasthenia are diverse as well as numerous. When once inaugurated it is well to remember, that the original cause may have subsided yet the deleterious results continue to be perpetuated of themselves. These secondary or remote changes are often due to actual organic alterations in the tissues which become permanent in character. Treatment directed to the original causes would be non-effective at this stage, and must be modified to meet the conditions present.

SOME DIFFICULTIES OF MEDICINE.

Diagnosis is both the ground work and highest expression of medical knowledge. It embraces not only the observation and interpretation of morbid phenomena but it seeks to pass beyond these in order to understand the remote and proximate causes of the disordered condition. The ancients were largely without either etiology or pathology yet they carefully and accurately noted the usual manifestations of disease. Their acumen in clinical study so far as it was developed at their time is unsurpassed in our own times. Modern appliances have equipped practitioners with numerous and various ways of extending the field of observation, yet the five senses of the ancients were as acute as our own. We now can make a closer approximation to real knowledge, yet this knowledge must always be of a relative nature. This closer view has opened up more questions and issues than have been settled by it. The disturbing factors have thus been multiplied and magnified and we have reached a position where we are largely in doubt as to the capacity of the organism to manifest its symptoms in accordance with the conditions actually present at any given time. That the diseased organism may not express itself as symptoms at all and all conclusions based upon these are fallacious. The characteristic lesion or sign may be nothing of the kind but something entirely different in its significance from the interpretation usually put upon it.

The process of reasoning which leads down to this is as follows: Sickness is always a modification of a normal organism, but the standard of the normal

organism is neither fixed nor understood. Our knowledge of what constitutes a normal organism is an approximation in knowledge, and it necessarily follows that our knowledge of disease must be a second remove from this, namely: an aproximation of an approximation. In addition to these inherent difficulties we may affirm that medicine can never employ the methods of induction. It cannot pass from the particular to the general truth. Induction demands an absolute identity of factors in any given class of results and this can never be true in regard to the human body since there is no such identity in living creatures. There are resemblances to say the most. The structures of these are continually changing. Assimilation of new and destruction of old are incessant, and among the concomitants of these there are inequalities which lead to differentiation and these cannot be actually known, but only estimated. Diagnosis as an art is the most perfect branch of medicine, yet as a science, possessing ability to exclude all doubt to the contrary, it is still very far from perfection or exhaustive in its bearings.

APOMORPHINE.

Apomorphine or hydro-chlorate of morphia as it is otherwise called is a drug peculiar in its action and wonderful in its power.

Since its discovery in 1868 volumes have been written principally by the French and even today the chemical, physical, and psychical, change which produces its extraordinary phenomena on man still remains a mystery. Like other material substances that the why and wherefore seems to be surrounded by an envelope of darkness only plunges one more into infathomable depths as he tries to seek its answer.

Its manufacture consists in the action of HCL (hydrochloric acid) on morphia in sealed tubes at a high temperature. The base can be obtained from the resulting hydrochlorate of morphia by disolving in water adding excess of bicarbonate of soda and extracting by means of ether or chloroform. Speaking in short, apomorphine is morphia minus one atom of water. In its chemical reaction it is different in all respects from morphia. Soluble in hot and cold water and also in alcohol. In powder it is snow white in color. The watery solution is at first colorless then changing to a dark olive green and in short almost black. The chemical changes which brings about this reaction is still sub judice. It was first used in an amorphous state which is of a grayish green color but is not soluble as the former, consequently not so well adapted for hyperdermic injection. It rapidly undergoes decomposition when exposed to the light and if employed may produce emesis plus symptoms of poisoning. It chiefly acts in poisonous doses as an irritant but a specimen that has been prepared for some time produces emesis plus the last symptom namely poisoning.

Its action is more rapid and certain than any other emetic drugs considering them to be tartar emetic, ipecac, and sulphate of murcury.

Let us study the clinical picture which the action of apomorphine produces. One tenth of the drug is given hyperdermatically.

Scarcely has a half minute elapsed when a fullness of the head begins to develope. The pulse increases in volume and is somewhat quickened. The pupils now slowly begin to dilate, the temporal artery seems like a cord of nearly twice its size from beneath the skin.

The face seems flushed. Prespiration soon appears. Respiration more frequent, the heart beats become more rapid and before two minutes elapse emesis is produced. The reaction sets in after two or three exertions of emesis which the patient knows not why he does.

And this is the reaction. Everything becomes relaxed, that which is before in a stage of excitement now changes to the opposite which lasts for at least an hour. The eyes are somewhat sunken, the pupils are widely dilated, the face is pallid and presents a drawn condition somewhat the state of the facial expression of one who has had cholera morbis. The muscles are relaxed with weakness in the extremities, yawning, and at last the patient passes into a sleep which on awakening all effects have passed away. From this picture what is the physiological action of the drug? On the circulation it increases the frequency of the ac-

tion of the heart due to the lowering of arterial pressure. The Superficial arteries of the human system becomes more prominent, hard to the touch very much like in alcoholism, especially I have noticed the temporal. The circulation is also changed by the action of the accelorator nerves and vaso-motor centre.

An over dose acts as a depressant, and the breathing becomes more rapid but not difficult. On the nervous system it acts as a stimulant to the brain. Vomiting due to apomorphine is produced by some action on the vomiting centre of the brain.

But you will question yourself how it does this? Either by the lowering of arterial tension which produces a greater affleax of blood to the vomiting centre which blood in itself is materially changed by apomorphine and brings about a stimulator to the centre itself, or the presence of the said drug acting upon certain nerves may transmit nerve impulses directly or indirectly to the vomiting centre in medulla oblongata and through reflex action produce the phenomena of vomiting.

The qualities which recommend apomorphine are as follows:

1. Rapidity of action.

2. The absence of danger from overdoses.

3. The lightness of secondary effect.

4. The easy manner of its introduction.

5. The shortness of period of emesis.

The average time of its action is 9 minutes wnich is much less then sulphate of mercury. The longest time for emesis is 4.15 minutes in case of alcoholism while the shortest on record is 1.75 minutes in case of Capillary bronchitis.

According to some, in three cases out of five there is no change in a childs face when this drug has been used until with one great effort the contents of the stomach are ejected.

The physical effects of the color solution which is in fact the decomposed deteriated drug is the same but rather more irritating to the skin and an increase of dose is required on repetition.

The English preparation is the purest while that of the German has a trace of morphia. It has been used by some with great success in chorea. The dosage for an adult is $\frac{1}{5}$ to $\frac{1}{1\frac{1}{5}}$ of a grain.

Dosage for a child.

18 months	$\frac{1}{5\frac{1}{0}}$	of a grain.
2 years	$\frac{1}{4\frac{1}{0}}$	" " "
3 "	$\frac{1}{3\frac{1}{5}}$	" " "
5 "	$\frac{1}{3\frac{1}{0}}$	" " "
8 "	$\frac{1}{2\frac{1}{5}}$	" " "

DIAGNOSIS.

In recent years there has been a close race between two methods of diagnosis, the first being based upon the discovery of some altered anatomical condition or perverted physiological function, the second depending upon the discovery of the cause of disease or the products of diserse in the body. At first *all* odds were in favor of the former method, but with the more definite knowledge of the cause of disease, the latter method of diagnosis has been steadily gaining ground. At the present time most practitioners would prefer not to make a *positive* diagnosis of scabies, pediculosis, favus, thrush, actinomycosis, tapeworm, trichinosis, cholera Asiatica, tuberculosis, diphtheria or gonorrhœa, without finding the cause of the disease. Thus the demonstration of low forms of life has been of diagnostic value in a large number of diseases of man as well as of the lower animals. A later contribution to diagnosis was the use of the products formed by some of the low forms of life. Along this line we may mention the use of tuberculin, a substance produced by the activity of the tubercle bacillus, which causes a rise in temperature in cases of tuberculosis and in this way often reveals deposits of tuberculous infection otherwise inaccessible to the diagnostician. Then came the diagnostic use of the knowledge that many low forms of life also produce certain products in the body. For instance, it has been found that the blood of a patient affected with Asiatic cholera will kill the spirillum, which is generally acknowledged to be the cause of this disease. The blood of a patient suffering from cholera will not have the same effect upon the cause of any other disease, nor will the blood of a patient not suffering from Asiatic Cholera, who has not had the disease, cause this peculiar effect. Therefore, this reaction is pathognomonic.

A simililar reaction occurs when the blood of a typhoid patient is added to a pure culture of the typhoid bacillus, and thus a diagnosis of typhoid fever may be made within the first three or four days. Still later it has been found that the blood of an animal affected with swine plague will have the same effect upon the bacillus of swine plague. This reaction may later be found to be true of other diseases, but our space will not permit us to enter the realm of speculation. It is undoubtedly true that at the present time a positive diagnosis of many diseases depends upon the disclosure of the cause, and this list should include all diseases with demonstrable cause. Thus, "influenza" is a cloak for a multitude of sins, because the diagnosis is often made without finding the bacillus of influenza, one of the latest contributions of bacteriology to diagnosis. It is evident that the cause of disease must be present before a pathological condition can exist, and the products of the cause of disease must be present as soon as any pathological condition of the body. But the diseased condition of the body may persist after the cause has disappeared, or we may not be able to find the cause, and therefore no physical sign should be overlooked.

THE ABUSE OF MEDICAL CHARITY.

Many articles in lay and professional publications have appeared lately which show to a partial extent that many evils exist in this line of work. Among the greater of these evils is the use of dispensaries and hospitals by men and women who are able to employ and pay for medical service. It is claimed that this use by these persons will and does force the medical man to work without pay for his services and further prevents those who are obliged by poverty to use the institution, from receiving the attention which their cases demand. The train of evils arising from getting something for nothing makes a long list. Proof and enough specific cases are cited to show that this dead beat system exists to a very large extent within the limits of Greater New York. Indeed it is doubtful if there is a single medical institution which is not a party to this system of pauperization to the extent of at least fifty per cent. of all cases treated. t may be forcefully stated and with emphatic conciseness that no systematic and efficient means are used in any of these institutions to prevent this pauperization. As politie measure these institutions could ill afford to suspend treatment of the undeserving. Their shrunken lists of new and return cases would not appeal to the business instincts of the lay board of trustees with their ideas of institutional growth and big business done. Further it would be impolitic on the part of medical clinicians who have business ideas. Out of a clinic of a given number of persons a certain proportion of these with or without guidance will reach the attending physicians private clinetele. It is not, however, certainly probable that he will become enriched or receive good fees from these people, but it is probable certain that something will be received. Whether a bird in the hand is worth two in the bush depends upon the point of view, Most men prefer the digital in these competitive latter days. For clinical teaching there is ample material without drumming trade and there is room to spare for their accommodation without the building of elegant hostelries for lodgment of the tramp class who may be induced to submit to an operation not previously recorded. Still among certain sentimentally sympathetic of the laity the one black sheep saved creates more power than the ninety and nine of a different class. Hence any scheme militating against the pet hobbies of these people, and they exist in large and wealthy numbers, will not be popular with them.

In asmuch as doctors were the men to begin and make popular dispensary and hospital work, it will largely rest with them to direct this work into proper and legitimate channels. That such direction is an impossible or herculean task would be admitted by no one. Such admission would certainly prove a lack of mental aptitude. The best men of the profession have not entered it from purely philanthrophic motives. Neither is entered by them for gain. That the laborer is worthy of his hire is a sufficient statement. But when a respectable and fairly honest livelihood fails men of sense are not apt to invest much time or study in preparation for such work.

The value to the surgeon of repeated

operations as in hospital practice, beyond certain limits is open to question. An opinion, decision, based on study, research, principles properly applied, with sound judgement is of more value to the patient than an exploratory operation, in most cases. It requires much less mental capacity to "cut down and find out," all risks being assumed by the patient. So in dispensary practise routine methods holds good and medicine from practically two or three bottles renders the patient happy and facilitates "business." Hence it may be faily open to "reasonable doubt" whether or not under present conditions any value accrues to doctors holding appointed chairs or to patients who are trying to get something for nothing. In conclusion it may be safely assumed that a large element of questionable character plays an interesting rôle in its dispensation of charity-medical.

TECHNIQUE IN OPERATIONS.

Since the advent of anesthesia the length of time elapsing from the first breath of the anesthetic until the last suture is placed, has been much increased. Operators are much more deliberate. There is more handling of tissues. There is more consulting as the work progresses. There is less of that deft and unerring rapidity. A gain has taken place through the practice of asepsis in the lowered risk to the patient. A boon to the sufferer has been given through anesthesia. These two, anesthesia and asepsis, should render a greater degree of skill in handwork (surgery) and thus make the technique perfect in all its parts. It is suggested that many things in preparing the field of operation might be completed before anesthesia is begun. In rapid succession should each procedure follow complete narcosis. In a majority of cases a definite and wellnigh exact diagnosis is previously made. In these cases certain definite steps of operative procedure are recognized. Each has its proper instrument or article for use. Some stages emergencies may arise, at others they must. Both probabilities and certainties can be foreseen and at no time should hesitation be visible. Modern technique in surgery, or technique in modern surgery, has no place for applause. Each assistant is as important to successful technique as the chief. All, working in complete unison, reduces greatly the element of time. The shorter the operation, the less of detriment to the patient from anesthesia, and the quicker the reaction. There is no, or little, unnecessary handling of tissues. This promotes union, is a bar to inflammatory processes, and is a guard against germ infection. The difference between the work of different individuals is largely a difference in technique.

BOOK REVIEWS.

THE DISEASES OF THE STOMACH by DR. C. A. EWALD. Extraordinary Professor of Medicine at the University of Berlin, Translated and Edited, with numerous editions from the third German edition by MORRIS MANGES, A. M., M. D. Second Revised Edition. New York. D. Appleton & Company. 1897.

Up to a short time ago there was very little literature relating to the subject of which this volume treats outside of a few short paragraphs or brief chapters found in general treatises on the practice of medicine. In this regard now, however, the field is becoming rich. It cannot be denied that there is always room for good substantial literature upon any branch of medicine, and we welcome this book as being one of the best of its kind. In the first and second chapters the author treats of the methods of Examinations. In this minute directions are given with reference to physical examination, electricity, technique of lavage, Gastrodiaphany, Gastroscopy, the Deglutition of murmurs, Gastroptosis, the different tests, &c. The third chapter takes up stenosis and strictures of the œsophogus and of the cardia. There is a field here for much instruction and the author has improved his opportunity. In chapter IV the subject of Gastritis principally is discussed. Probably the most interesting chapter is the VII devoted to Cancer of the Stomach. It is a very sure fact that this disease is constantly on the increase, and sadly enough it seems to be beyond the domain of cure. The subject is discussed very fully and presents whatever is known of scientific value at the present day. No less interesting and equally as important is Ulcer of the Stomach which is given in the following chapter. There

are many other chapters quite instructive and prominent that cannot be discussed now. The book is well indexed and is also handsomely printed and well bound. It is a valuable contribution to the literature of the subject.

INEBRIETY ITS SOURCE, PREVENTION, AND CURE. By CHARLES FALLEN PALMER, New York. Fleming H. Revell Co. 1897.

The first thirty five pages of this little book is devoted to the nervous mental organization. The next eighteen pages treats of The Inebriates First step toward cure. The next twenty pages is devoted to The Remedying of the Preinebriate Morbid Conditions and the Strengthening of the Bases of Self-control. The next section is devoted to the Inebriate Continuous Progress in Building up Moral Manhood. Moral characteristics and Various Types of the Inebriate is the next and last section discussed. The work contains something over 100 pages and each section of this most difficult and vexed question is handled in a very clear and forcible manner.

THE X RAY or Photography of the Invisible and its Value in Surgery. By WILLIAM J. MORTON, M. D. Written in collaboration with EDWIN W. HAMMER 1 volume, 12mo, cloth and silver, 75 cents; paper, 50 cents. Fully illustrated. With valuable appendices by Prof. Roentgen, Thos. A. Edison and Dr. Oliver Lodge. Nearly 100 excellent X Ray pictures and diagram illustrations. Colored plates showing rays in Crookes' Tube. The entire work beautifully printed on coated paper.

The work explains in clear and simple style how extraordinary pictures are taken through solids. Full description is given of the apparatus used, and the text is profusely illustrated with fine half-tone illustrations giving fac-simile copies of the pictures taken from the negatives of the author. The subjects are varied. One shows distinctly a bullet lodged in a man's hand for which the surgeon had probed without success. The X Ray showed the bullet at once, and the surgeon had do difficulty in removing it. The text is beautifully illustrated with those wonderful X Ray pictures. The book is of inestimable value to the physician and surgeon, the photographer and the scientific student, but will be largely read by the public generally, for the subject is most fascinating and instructive. It is unquestionably the most important scientific discovery of all times.

THE YEAR BOOK OF TREATMENT FOR 1897. A Critical Review for Practitioners of Medicine and Surgery. Lea Brothers & Co., Philadelphia. 1897.

This is the thirteenth edition of this book. The thirteenth edition of any book is praise sufficient to place it among the "hardy annuals" of medical literature. It is so well known as to make a formal introduction to readers superfluous.

The present volume fully maintains the excellent reputation which the book has won for itself as a carefully executed sifting of the work done in the practical departments of medicine in the course of the past year.

THE PILLAR OF FIRE; or Israel in Bondage. By Rev. J. H. INGRAHAM. 12mo. pp. 600. Boston: Roberts Brothers. $2.

This work is similar to that of "The Prince of the House of David," viz., by presenting the scenes and events he would describe, through a series of letters, alleged to be written by one who is supposed to witness with his own eyes what he is made to place before those of the reader. As in "The Prince of the House of David" a young Jewish maiden is supposed to witness many of the most remarkable scenes in the human life of the Lord Jesus, and to write of them to her father in Egypt, so in the present work a young prince of Phonicia is made the medium of communication between the author and his reader. It is a work of great historic interest. The work is nicely illustrated and well printed.

ITALY IN THE NINETEENTH CENTURY, and the Making of Austro-Hungary and Germany. By Elizabeth Wormeley Latimer. Octavo, pp. 436. Chicago: A. C. McClurg & Co. $2.50.

Those who have read Mrs. Latimer's other volumes of nineteenth century history will not mistake her book on Italy for a learned or profound contribution to the literature of the subject; it is rather a series of clever sketches of personalities and events, so mingled that the significance of the events is sometimes all but lost in the portrayal of the personalities. The book is helpful in outlining the re-

lations of modern Italian history to the history of the other nations of Continental Europe.

TRANSACTIONS of the Eighteenth Annual Meeting of the American Laryngological Association. 1896. New York: D. Appleton & Co. 1897.

We return thanks to Dr. H. L. Swain for sending us these useful and valuable transactions. We find a great deal of interest in them. It contains many fine articles, tersely written and well bound.

TRANSACTIONS of the American Climatological Association for the year 1896. Vol. XII. Philadelphia.

Few Transactions present a neater and more handsome appearance than those before us. The articles are of a good variety and are well selected and written. Dr. Guy Hinsdale, of Philadelphia, is Secretary and Treasurer. The volume complete contains nearly three hundred pages.

TRANSACTIONS of the Fifty-first Annual Meeting of the Ohio State Medical Society, held at Columbus, May 27th, 28th and 29th, 1896. Toledo, Ohio.

These Transactions are always full of very interesting and valuable information. The President's address on A Study in credulity, by Dr. Milliken, is replete with useful points. All the articles are of a high order and carefully prepared.

TRANSACTIONS of the Royal Academy of Medicine in Ireland. Vol. XIV. Edited by William Thomson, M. A. F. R. C. S. General Secretary. Dublin: Fannies & Co. Ltd. 1896.

These Transactions are the largest and the most handsomely gotten up than any that come to our desk. They are full of instructive material, and makes a nice volume for reference.

TRANSACTIONS of the Homeopathic Medical Society of the State of New York, for the year 1896. Vol. XXXI.

Dr. John L. Moffat is Secretary of this Society, and he gets up a nice set of proceedings. We are always glad to get these transactions, and peruse their contents with much interest.

The Twenty-ninth Annual Session of the Mississippi State Medical Association, April, 1896.

LITERARY NOTES.

LIPPINCOTT'S MAGAZINE FOR APRIL, 1897.—The complete novel in the April issue of Lippincott's is "Ray's Recruit," by Captain Charles King. It is in this favorite author's well-known manner, and recounts the experiences of a most superior and unusual private.

Elsie A. Robinson, in "Joe Riggler's Romance," tells a curious story of a mining camp. Mary B. Goodwin explains the difficulties which certain charming sisters had in "Answering his Letter."

Some odd facts about "Animal Cannoneers and Sharpshooters" are given by Dr. James Weir, Jr. Calvin Dill Wilson describes "Oyster-planting and Oyster-farming." Fred. Chapman Mathews puts forth "A Plea for our Game."

"Goethe in Practical Politics" is defended by F. P. Stearns, who thinks that the poet was a patriot, a liberal conservative, and a wise statesman. J. Harvey Pence discusses "Politics on the American Stage."

Emily P. Weaver gives "A Glimpse of Old Philadelphia," from the book of Peter Kalm, a Swedish botanist, who visited the city about 1749.

"The Gentle Art of the Translator" is expounded by Caroline W. Latimer. Alice Morse Earle writes of "Matrimonial Divinations," and Beulah Cary Gronlund of "Two Chinese Funerals."

The poetry of the number is by Nora C. Franklin, Carrie Blake Morgan, and Frederick Peterson.

The number of Scribner's Magazine appearing at Easter-time is always particularly bright and attractive both in contents and illustrations. The April issue this year contains two full-page compositions by Gorguet, called "A Roman Easter;" a portrait by Howard Cushing; the Transformation scene in "Dr. Jekyll and Mr. Hyde," by William Hole; Albert Herter's illustration for "Cor Peccatrix," and Gibson's "London" as some of its artistic features. Of special importance is Cosmo Monkhouse's article on William Quiller Orchardson, R. A., the Scotch painter, who came to London in 1862 and won speedy recognition. Mr. Monkhouse received the artist's help in choosing the ten pictures that illustrate the

article. Orchardson is a great colorist, and is best known, perhaps, as the painter of "Napoleon on the Bellerophon." Orchardson has, it is said, that rare gift of "inward vision, which presents to his mind pictures so clear and strong, almost to their details, that he can transfer them to his canvas with little hesitation or trial."

To American readers who have not ready access to the great bulk of the European periodical press, Continental as well as British, (and who has?) there is no magazine that can take the place of The Living Age. The whole world of literature is its field, and its readers get the best that the world offers. For the busy man and woman of this living age it is invaluable.

The publishers have purchased the serial rights to the publication of "In Kedar's Tents," by Henry Seton Merriman, author of "The Sowers." "In Kedar's Tents" is an attractive story of adventure in Spain during the Carlist war. It is said to be full of incident, and to contain some clever sketches of cha-acter. Mr. Merriman's style is direct and forcible, and his humor is delightful. Readers who are weary of the morbidly introspective in fiction will find this story refreshing.

Its quality abundantly sustains the reputation which Mr. Merriman's earlier stories have won for him in England and America. The first chapters of this work will appear in The Living Age of April 3, and continue through fifteen numbers.

The early April issues will contain some other papers of striking and timely interest. Among them, Mr. Gladstone's pamphlet on the Eastern question, which has so aroused the attention of the Engpeople; Max Muller's Literary Recollections; Francis de Pressense on the Cretan Question; Leslie Stephen on Gibbon's Autobiography; and a reply by Sir Frederick Pollock to the article on the Hidden Dangers of Cycling which appeared in a March number of the magazine.

The first April issue being also the first number of a new volume, the 213th, and a new year, the 54th, offers an excellent opportuuity for begining of a new subscription.

The subscription has recently been reduced to $6.00 a year and is published by The Living Age Co., Boston.

The Futility of the Spelling Grind. Dr. J. M. Rice, in the April Forum.—Believing that the most rational method of determining what our teachers might be expected to accomplish would lie in descovering what results the more successful ones had been able to obtain, I ventured to undertake a series of researches which I hoped might serve as an initial step toward bringing this problem to solution. The material presented in the present article is intended to show what our teachers have accomplished in spelling, and what, therefore, may be reasonably demanded of our schools on this subject. The traditional standard in spelling is perfection; but this standard is unreasonable and consequently cannot be too soon abandoned. * * * My researches in spelling were made in the form of tests, the number of children examined reaching nearly thirty-three thousand. My first test consisted of a column of fifty words; the second of words in sentences; and the third of spelling as found in compositions. * * * On directing our attention to the results of these tests, we are confronted by a number of interesting phenomena. The most striking of these are: First, that in the vast majority of instances the results are very close. In fifteen of the twenty-one schools shown in Table No. 2, the average on the second test were from 83.3 to 77.9. Second, while the results in the lower grades of different schools showed considerable variation, those in the eighth year classes, which represent the end of the school course, were also remarkably even. In twelve of seventeen eighth-year grades the averages were from 84 to 88, and in fifteen of a total of twenty sets of eighth-grade composition, examined for spelling, the variations were only three-tenths of 1 per cent., the results lying between 99.1 and 99.4. These figures become doubly remarkable when we consider that the twenty-one schools not only represent institutions in many sections of our country, but that, in addition, they are samples of schools conducted under all conceivable conditions. Further, from a pedagogical standpoint, all varieties of schools are included, some of them belonging to the most mechanical, while

others are among the most progressive in our country. * * *

Do not these results indicate that, in learning to spell, maturity is the leading factor, while method plays only a subordinate part? And, if the superiority of the old-fashioned spelling grind cannot be demonstrated, is it not our duty to save the child from this grind? Moreover, as the results prove that, beyond a certain minimum, the compensation for time devoted to spelling is scarcely if at all appreciable, have we not here discovered an element of waste, which, if eliminated, would open the way to an equal enrichment of the course of study, with out detriment to the formal branches?

A Collection of Celebrities.—There is probably no other publication in America so successful as The Youth's Companion in securing the services of famous men and women. Think what a collection this is, for a single year: Ian Maclaren, Rudyard Kipling, Stephen Crane, Andrew Carnegie, Hon. Theodore Roosevelt, Dr. Lyman Abbott, Madame Lillian Nordica, Hon. Carl Schurz, Charles Dudley Warner, Mrs. Burton Harrison, Dr. Edward Everett Hale, the daughter of Longfellow, the son of Emerson, three members of President Cleveland's Cabinet, a United States Senator, the Speaker of the House of Representatives and half a hundred other men and women equally well known! The value of such a list of writers lies in the fact that each describes or discusses the work with which he is identified—the work that has made him famous. Subscribers to the paper for 1897 receive free The Companion's Art Calendar for 1897, the most costly gift of its kind The Companion has ever offered. An Illustrated Prospectus will be sent free to those who address

The Youth's Companion,
205 Columbus Ave., Boston, Mass.

Announcement of the Third Edition of the March Atlantic.—The Publishers of the Atlantic announce that the third edition of the March issue of the magazine is now ready. The unusual demand for this number has already completely exhausted two editions, and the third is now ready for delivery.

The widespread interest in public affairs in this country is well illustrated by the large sale of the March issue of the Atlantic, which contains John Fiske on the Arbitration Treaty and Woodrow Wilson on President Cleveland. The scholarly treatment of the subject by John Fiske makes the intricacies of this treaty wonderfully plain and shows it in all its broad significance. The recent inaugural ceremonies at Washington, closing the career of Mr. Cleveland as our chief magistrate, bring him more than ever before the public eye, and Mr. Wilson treats his career with judical fairness and genuine enthusiasm.

In the "Progress of the World" department of the April Review of Reviews, the editor comments on the change of administration at Washington, on the tariff bill, and other measures before the extra session of Congress, and on President McKinley's diplomatic appointments; the Greco-Cretan situation is carefully reviewed, and other recent developments in foreign politics are treated with the thoroughness and impartiality to which the Review's readers have grown accustomed.

Meeting of the Missouri State Medical Association, May 18, 19 and 20.

Present prospects are that the meeting of the Missouri State Association this year is going to prove very satisfactory. The committee have all gotten to work early which is a good indication. The committee on scientific communications is already in receipt of titles in numbers and character sufficient to insure the programme scientifically attractive. The executive committee are enabled to announce the following programme, the details of which only remains to be completed. The association will meet in St. Louis May 18, 19 and 20. All the first, the second and the third day until noon will be devoted to the scientific programme. On the evening of the first day the association will as a body attend a session of the Illinois Society in East St. Louis. On the evening of the second day the Illinois Society will attend as a body a session of the Missouri Association, after which there will be a banquet and reception. On the third day both bodies will adjourn and join a steamboat excursion on the river.

Dr. J. W. Long, of Richmond, Va., will Return to North Carolina.

Dr. J. W. Long, of Richmond, Va., will, in a month or so, return to his native State. He will locate at High Point, and be associated with Dr. D. H. Stanton. They will build a thoroughly equipped hospital with all modern architectural and sanitary improvements for their private use.

Dr. Long's return to North Carolina is certainly a pleasant surprise. There is no doubt that he is better known as a surgeon than any man in the State, and his large experience and skill, with the assistance of Dr. Stanton, will insure success wherever he goes.

The Latest Views on Phthisis.

We present the following from the London Lancet as the best statement of the difficulties which have surrounded a clear and satisfactory conception of this disease. We feel satisfied that the position taken is correct and the only practical one so far presented among the many thousand of speculations and theories heretofore offered. The paper will bear close reading and study. We are confident that the prevention, control and therapy of tuberculosis must be along the lines indicated below:

The Associazione Medica Lombarda, as The Lancet from time to time has shown, is eminent among her Italian sisters for work not more independent than sound, and the "full-dress discussion" the other evening, in which her leading members took part, on "Phthisis, its Primary and Secondary Causes," was quite equal to her best traditions. Fifteen years ago phthisis was accepted by most pathologists as co-extensive with tuberculosis. It was an infective disease determined by the action exerted on various organs by the bacillus of Koch. The objection that it could be infective and at the same time hereditary was met by the explanation that not phthisis per se but the predisposition to phthisis was hereditary. The children of phthisical parents were thus particularly vulnerable in presence of the bacillus, a neglected "cold" or a slight influenza sufficing to invite the infection. The infective power of the bacillus was, indeed, the most formidable factor in the disease. No one was safe. Laboratory research showed the diffusion of the bacillus to be well-nigh limitless. Not only the air, but the food and drink, nay, the house furniture, the benches of schools, the compartments of railway carriages, the books of library shelves, and banknotes, all were potential or actual transmitters of the dreaded germ. Fifteen per cent. of the living harbored it; in the dead it was found in the ratio of 30 per cent. Panic at its ubiquity inspired the search for specifics against it. In spite, however, of antiseptic solutions, parasiticidal injections and immunising serums innumerable the bacillus refused to yield, cropping up mercilessly in the sputum, to confirm what used to be ridiculed as an Italian superstition—viz., the danger of living near, or succeeding to, people given to coughing and clearing the throat. Of late years, however, the panic has died down. Phthisis is acknowledged to be eminently curable. Under sound hygiene pulmonary tuberculosis is daily being arrested. Surgical intervention often suffices to cure a peritoneal phthisis. The sputum is seen to be dangerous only in a state of perfect desiccation. Even the breath of the phthisical may be respired with impunity. The bacillus of Koch, though still a power, is no longer supreme according to many pathologists. According to others there are concomitant bacilli even more dangerous, to which that of Koch is simply the "crossing sweeper" facilitating their entrance. Thus, these observers explain the fact that in all the more pronounced cases of phthisis there are found other bacilli; while those cases in which the bacillus of Koch is alone detected are generally mild and run an easily tractable course. The hectic fever, symptomatic of the graver forms of phthisis, is accounted for by these concomitant bacilli only. Yet another group of pathological assailants the bacillus of Koch has to confront. These would assign it a simply accidental role—appearing in local manifestations merely, manifestations well defined and eminently curable. The disease caused by it is nothing more than a scrofulosis, in which the glands, the skin, the cartilages and the bones disclose its invasion, with a reaction for the most part favor-

able. The bacillus, for example, may lie hidden in some viscus of a healthy subject whose resisting power by a blow or a wound is temporarily impaired, but which soon rights itself, to the expulsion of the intruder. Phthisis according to the consensus of debaters led by Dr. Gatti at the Associazione Medica Lombarda, being not due to the bacillus of Koch, being neither infective nor contagious, resolves itself into what it appeared to be to the former generation—a disease of nutrition, a perversion of hygienic conditions due to causes economic, social and others having their roots in our modus vivendi. The primary, the essential factor in the evolution of the phthisical state is degeneration, organic decay, while the intervention of the bacillus of Koch represents only "unaccidente ter minale," a modification of a process already determined. In certain subjects, honeycombed by insufficient alimentation, tuberculosis is but an anticipation of the decomposition ensuing after interment. As, indeed. Virchow and Hansemann have shown, there are phthisical patients in whom the bacillus of Koch is "conspicuous by its absence," while there are maladies—diabetes, for example—in which tuberculosis is a complication almost invariably present. We return, then, to the pathology, the prophylaxis, and the therapeutics of our fathers—such, at least, is the outcome of the memorable discussion by the Milanese pathologists and consultants the other evening—and relegate to the first fine among the causes and the cure of phthisis those factors and agents which have been temporarily pushed back into the second—factors represented by a violated hygiene, and agents recruited from the resources by which that hygiene is vindicated and restored.

The Proposed City Hospital for Consumptives.

Dr. W. Trendenthal, of New York city, in an article on the "Proposed City Hospital for Consumptives," (N. Y. Medical Journal) speaks against the views of the Health Board of New York.

Firstly. he says, the Board of Health wishes to assume entire control of such a hospital. This is entirely in conflict with the object for which such a board is organized, viz., for the purpose of preventing and not of treating disease.

Secondly, Trendenthal does not believe as the Board of Health authorities do, that such a hospital would be the means of stamping tuberculosis out of existence. The statistics collected by him speak against any such claim.

Furthermore, "cleanliness, disinfection, and isolation," are *not* the means of preventing tuberculosis, as per example in China tuberculosis was not endemic until recently.

Finally, be it granted that a city like New York can provide hospitals for the great many thousands of consumptives, even then Trendenthal denies that this measure will tend to stamp out tuberculosis. Such an experiment has been tried without any successful issue resulting. It was just a hundred years before the discovery of the tubercle bacillus that a law was passed in Naples regarding the isolation of tuberculous patients. This law was so unusually severe that consumptives were placed in the same category as those suffering from the pest. Having once appeared in a family, tuberculosis, according to the edict of the law of Naples, was one of the severest afflictions and hardships that could have occurred to a family. Such a family was refused a residence by all house and land owners. Driven from place to place, the head of the family soon saw his business and occupation disappear, only to be replaced by poverty and misery. Houses in which phthisis had developed were shunned; and all this with what result? Absolutely nothing was effected through these inhuman measures, at the *expiration of 56 years*, during all of which time the law was in operation, *there was no diminution* in the number of *tuberculous patients*, the disease prevailing with the same severity and fatality.

A Case of Intra-Uterine Amputation.

I was called to see Mrs. A., a primipara, some five weeks ago, who was at about the fifth month of utero-gestation—threatened with miscarriage. I prescribed tinct. opii in 20 drop doses every 3 or 4 hours till contraction ceased. I also ordered patient to take five grain doses of

tannic acid every 4 hours till all hemorrhage disappeared. The case did very well till a few days ago, when I was called hurriedly to see her again. Upon my arrival I learned that the fœtus had come away. Gentle manipulation of the womb brought the after birth away. I then inspected the child, and from all appearances death must have taken place several days before its expulsion into the world. It was well formed and presented no physical deformity except its right leg, half way between the knee and ankle had been completely amputated. The tissues enveloping the bone had perfectly healed, and presented no signs of inflammation. The bone itself protruded slightly beyond the flesh with a show of bloody malarial thereon. With that slight exception, the recovery from the amputation was perfect.

I made diligent search for the amputated member, but failed to find it, which, from the history of such occurrences, is often the case. A question arose in my mind what brought about this condition of things? I thought of the umbilical cord, and when I came to examine it, I about decided that it must have been the surgical instrument used in the amputation. The cord was at one point narrowed down to a mere string of a tough fibrous character, and apparently strong; which more clearly convinced me that the leg must have been severed by it.

Messrs. Editors, I can't say that there is any very great interest in this case, more than its peculiarity—never having seen any thing of the kind before. I wonder how many patrons of your valuable medical journal ever met with such cases. For fear I make my article too long I will close.

T. T. Ferree, M. D.

Asheboro, N. C.

Some Clinical Jottings on Five Hundred Cases of Labor.

In the second instalment of his paper, entitled "Some Clinical Jottings on Five Hundred Cases of Labor," (The American Journal of Obstetrics and Diseases of Women and Children, March, 1897,) Dr. Eugene R. Corson, of Savannah, pleads for the use of the forceps *in loco doloris*. Out of the 500 cases the forceps was used 133 times; of these 68 were comparatively cases where the forceps was used to shorten the labor and relieve the woman. As he characterises it, the forceps was used *in loco doloris*. He contends that when the cervix is perfectly dilated, and the labor is in any way prolonged, delivery by the forceps, in proper hands, is a perfectly justifiable procedure to be classed among the many other means at our disposal which have for their objects solely the relief of pain. He points out the fallacy in the arguments of those who decry the forceps on account of its misuse in unskilled hands.

The 16 tabulated cases of version, with 2 deaths among the women, and 14 deaths among the children, is certainly a gloomy showing, and points to the dangers of this manœuvre when there is any complication or impediment to the fairly rapid delivery of the child.

An infant mortality of 80, including the fœtus of a few weeks, as well as the infant dying during the puerperium points to the many complications which were met with. As the writer states: "This large infant mortality shows in a striking way that when inimical factors produce excessive complications in labor, with a large maternal mortality, the infant mortality is increased almost in a geometrical ratio." Of the maternal mortality, there were 4 deaths among the 404 whites, and 8 deaths among the 96 colored. Of the former, 1 was from eclampsia, 2 from puerperal septicemia, and 1 from thombosis and embolism.

Of the 8 deaths among the colored, 4 were due to eclampsia, 1 to placenta prævia, and 3 to septicemia, all neglected cases.

In one case among the whites the danger of the intra-uterine douche is shown where the fatal issue was certainly hastened, if not directly caused, by the douche.

Another case of septicemia among the whites is described in detail as pointing to infection from the husband. The child was born without the hand of the physician or nurse coming in contact with the genitals. Septicemia rapidly developed with death on the tenth day. The husband who had been sleeping in the same bed with his wife up to the time of her confinement, was found to be suffering from extensive ulceration of the gums, with many carious teeth. The lesson to be drawn from this case seems clear enough.

The Science of Medicine to Public School Education.

The relation of the science of medicine to public school education was the subject of a paper read by Dr. Jno. Punton at the University State Medical Society, April 6, '97. In this he maintained that the education of children concerned the development of the whole man, his mental, moral, and physical powers and capacities beside the correction of any abnormal tendencies which leans toward his social degeneracy.

This then allies education to the science of medicine. He also took occasion to emphasize the evils of the present "cramming process" and insisted that the time has come when we as a profession should cry a halt and compel the application of brakes.

One of the interesting features of this paper was the results obtained by some original Anthropometrical investigations which the Doctor made in the Kansas City High School which proved that the school children of that city was far inferior from a physical standpoint than were the Boston children according to the chart furnished by Dr. Sargent of Barvard. Not only were they deficient in weight and height for the same ages but also the vital measurements of the body.

What causes this marked difference in physical standards is a very interesting question. It has been suggested that it is due to climate and in support of this it is claimed that the soldiers of the southern army during the war were much smaller in stature and general physique than were the northern ones.

Again it is asserted that the school children of the south today are not as well developed physically as are the northern children. Another reason assigned for these apparent grave physical defects is that the percentage of foreign born children is greater in the western than the eastern schools but this cannot be sustained by facts. Again it is claimed that Boston people are much slower in their movements and take life more easy than we in the West, hence this development is more in accord with physiological aw.

Let this be as it may there are several other good reasons which the Doctor thought might at least suggest the cause "For instance if the statement made by our recent visitors from New York be true, viz. That in their opinion the Kansas City High School was unexcelled in this country for its high standard of proficiency, then it would seem to suggest that possibly its high standard of excellence was gained at the physical expense of its pupils just on the same principal that a minister of the Gospel gets the credit of building a church when in reality it was built at the expense of its members due possibly to the ministers ability to stir them up and increase their spiritual zeal and zest." The paper then went on to say that many a school undoubtedly gains its reputation of excellence by virtue of its various teachers ability to extract the greatest amount of brain tension from its pupils in a limited length of time.

It also condemned the practice in vogue in the schools of placing premiums on examinations by grading them into three classes. The pupils naturally strive to get the first prize and if they fail their apparent ignorance is published to the world. The shock to the nervous system from such a failure cannot be overestimated and no one knows this better than the family physician.

But while many faults may be found with our present school system the paper then goes on to say, that these are not due to the officers and teachers themselves but the chief difficulty can be distinctly traced to the parents and guardians as well as the home life of the pupills. Many a child is compelled by its parents to sacrifice its constitution for what is deemed by them its educational necessities. The paactice of employing persons to coach the children after school hours is condemned and the depriving the children of legal and other holidays for proper recreation. That the education of children from a medical standpoint was not being carried far enough even though it be true that medical boards were already appointed in Boston and New York, yet their duties were largely confined to the spread of contagious diseases.

What is needed to be done is for the teacher and the physician to harmonize the discordant elements of home life and

school life before it will be possible to secure the best results in not only overcoming disease but preventing its occurrence. The paper was well received and was liberally discussed by the members present.

The Removal of Foreign Bodies from the Cornea.

Mechanics and workingmen have learned from oculists (who should have taught them better) the method of removing foreign bodies from the cornea by "picking them out" with some sharp or slightly blunted metal instrument. In every factory or workshop every day, and often many times a day, it occurs that pins, knives, etc., are thus blunderingly used, frequently with great injury to the cornea, with the resultant formation of corneal ulcers, keratitis, iritis. or at least, leucomata. All text books of opthalmology advise the use of the "corneal spud" for removing such particles, and every young physician supplses himself with the instrument. But it is the most outrageously ill-adapted for the purpose conceivable. It is impossible for any patient to hold the eye still enough to permit any hand thus to remove a partly-imbedded grain of sand, or emery, or what-not, without wounding the epithelium of the cornea. For this purpose a rigid tool is absurd, and a rigid metal instrument is the acme of absurdity. Every physician should teach workingmen how easy it is, and how free from danger of injury, to remove the great majority of foreign bodies on the cornea with a simple wisp of cotton. Any particle not thus removable should not be sought after with pen-knives, awls, pins, or studs, but the patient should be sent to a physician. Twist a little wisp of absorbent cotton having long fibres, upon itself until the fibrils are well caught, but are not too densely packed, upon each other. Fold the roll upon itself and grasp it half an inch from the rounded or curved extremity. The eyelids are held apart by the fingers of the left hand, and the patient instructed to look in such a direction as to bring the foreign body into view. By delicate though firm pressure, the wisp of cotton is brushed, not too quickly across the cornea, or it is given a slight twist or screw like movement when deftly pressed against the cornea. Almost invariably the dust particle is removed at the first trial, being caught or entangled by the fibrils of cotton. Cocain, spud, time, labor, and injury are all dispensed with and happily spared. The procedure may not be for the commercial advantage of the specialist, but it is worth more to the world than seven "original researches" and prize essays.

A Serious Cerebral Injury due to Forceps Delivery and Resulting in Imbecility.

S. W. S. Toms reports the case in the March number of Archives of Pediatrics, of a boy now fourteen years of age of normal physical development in every way, whose vital functions are in no wise disturbed by the cerebral lesion; appetite, although large, is always good; digestion, defication and urination, bodily strength, and sleep are normal. The special senses, except speech, appear intact.

The parturition lasted twelve hours, being terminated by forceps. This was the second gestation, the former was a perfectly natural labor.

A mark of the instruments remained on the child's forehead for over 2 months. At three months the patient developed convulsions, that recurred in two weeks; subsequently having "spells" every two or three days for about one year. These were described as slight spasms, the eyes deviating to the left, followed by a general convulsion of short duration, and a sleep with stertor. The second year he suffered from them daily, numbering from fifteen to thirty, and as many during the night. The third year he had measles and whooping cough without sequelæ. He received a fall from an open window thirteen feet from the ground, striking on his head, but no perceptible wound resulting. The convulsions became more frequent and severe after this, and for the first time biting his tongue. He also had an attack of cholera infantum during this year, in which he had one hundred and fifteen convulsions in two hours the first night. A remission followed, in which he had but one or two a week for eight months, but they gradually increased up

to seven years of age, when he had pneumonia. Another period of remission followed for seven months, when he had the most severe ever experienced. They became irregular and finally stopped, and he has not had any since. He could talk and form sentences in expressing himself previous to the fall.

Status praesens.—He is unable to talk beyond saying "pie," "cake," "cat," "boat," and a few monosyllabic words. He obeys fairly well, understands commands, is destructive, and attempts "thigh friction" at times when left alone, by lying on a sofa. He has nocturnal involuntary emissions occasionally. At times he gets very nervous and restless, bad tempered and unruly; when awake he constantly makes a blowing noise with his lips, accompanied by athetoid movements and facial contortions. He formerly dribbled before six years old. There exists no deformity of the cranial bones whatever, and the lesion is undoubtedly cortical—possibly a large clot with subsequent mal-development. He has attacks of pyrexia at nights frequently, and often acts as if suffering from headaches.

College Instruction in Ophthalmology.

Dr. Robert M. Lapsley, of Keokuk, Iowa, in a paper read before the Ophthalmological, Otological, Larnygological and Rhinological Association's meeting, at St. Louis, tried to emphasize some of the present needs for improvement in medical college instruction, especially pertaining to ophthalmology. The title was "College Instruction in Ophthalmology," and the substance is given below.

During recent years great changes have occurred in the practice of the medical profession, and changes fully as great in the teachings of our medical colleges. It is not a great while since clinical instruction came into prominence as an important aid to teaching, and even now while of recognized value, the vast amount of clinical material is not utilized to the best advantage.

Laboratory instruction to a large extent is of quite recent development, and now occupies a very prominent position in our methods of instruction.

These changes are still going on at a very rapid rate, and it is important during this period of evolution that we do what we can to make practical, permanent improvement.

The courses are longer, and more time can be given to specialties, and ophthalmology stands out as one of great importance. With the country overrun by charlatans and spectacle venders, we can readily see that the eyes of the people are in danger, and our noble profession is severely encroached on. The profession, as usual, is partly to blame on account of improper preparation on the eye and its diseases. It is, therefore, important that the instruction should be more practical and more thorough in our colleges. I have yet to find an ideal eye course, and I have visited a good many colleges both east and west.

The recitation course has been neglected, and we must admit that nothing stimulates more diligent research and earnest thought, than having a quiz or recitation in view, where the record counts for or against a final success. The didactic lecture is well enough and should be continued.

Laboratory instruction should be represented by use of the ophthalmoscope and studies of refraction.

The clinical work as a final and crowning effort is of vast importance, when properly presented after the student is prepared.

I would suggest then in our future courses a careful division of time between didactic lectures, recitations, instruction in use of the ophthalmoscope and study of refraction, and clinical work, and in our undergraduate colleges, emphasis on the important diseases where "delays are dangerous," should be made.

With this as an outline, we can build much more practical and valuable courses than are usually given today.

Congenital Abscess of the Long Bones.

Dr. B. E. McKenzie, of Toronto, in the N. Y. Medical Journal, of Feb. 20th, has an article which is of unusual interest and merit. At the meeting of the American Orthopedic Association, held in Buffalo in May, 1896, he reported ten cases of Congenital Abscess of the Long Bones. In no one paper hitherto published has so many cases of this kind

been published as coming under the notice of one surgeon.

There are four cases of complete absence of the radius occurring in three patients—all boys. The hand not having support on the radial side was drawn toward that side so as to articulate with the side of the lower end of the ulna, making an angle of about 80 degrees. Cuts are given showing highly satisfactory results after operation. In each case there were only four digits on each hand.

In one case the ulna was absent. This is the third case reported of complete absence of the ulna. Here there were only two digits, viz., a thumb and index finger. As these were in good position, no operation was called for.

In this same patient, both tibiæ were absent, and the consequent deformity of the lower extremities was so marked as to preclude the possibility of securing useful limbs by any operative or orthopedic measures. In another case having both tibiæ absent, amputation was performed, removing the distorted leg from the femur. Careful dissections of these limbs by S. F. N. G. Starr shows abnormality in nearly every structure. In the latter case the child also had cleft palate and hare lip.

One case is reported of absence of the fibula. The distortion was not nearly so great, and a satisfactory result is obtainable through orthopedic means.

One case is reported of defective thoracic wall in the absence of parts of 3rd, 4th and 5th ribs of the left side. In the same case there was a partial absence of one hand.

Two other cases are reported—one of absence of tibiæ, and one of absence of the arm, below elbow, completing this most interesting paper.

It is here demonstrated that the future of these cases is not without hope of much gain through treatment.

Ophthalmia Neonatorum.

Dr. Will Walter, of Chicago, wrote a paper in the Norfolk Medical Journal for January 16th, 1897, entitled a "General Consideration on the Treatment and Management of Ophthalmia Neonatorum."

Without going into the well known methods of prophylaxis and treatment, he first takes up the etiology of milder forms of conjunctivitis, so common in babies and children, tracing many of them to modifications of this disease.

To bring out the desired view of the subject, the following assertions are made:

First. We are accustomed to look upon ophthalmia neonatorum as present only when the symptoms are intense, and to overlook the possibility that minor affections may be of like ætiologic kind.

Second. Unmindful of these modifications, accoucheurs omit the post-parturition prophylaxis which should be usual where there is the slightest discharge from the canal. Further than this, obstetricians should be less prone to delay the prophylactic treatment till after the opportunity has arisen for the implantation of the germs upon the sensitive and receptive conjunctiva.

Third. Usually, may I say, as ophthalmologists we are localists rather than true specialists, and unweary of the general treatment of our little patients.

He believes that, in the intense cases, vision is many times lost or impaired by failing general nutrition, and that at times general treatment is more important than local means—witnesses the reports of cases where the cornea have been destroyed after the disease has itself almost subsided.

The following recommendations are made, in addition to the usual local treatment, viz.: To avoid the effects of fear upon the bread secretion of the mother, and to take measures to insure nutrition, food elements, including a good supply of oxygen by as free "airing" as in health; to employ water freely for drinking purposes, for an enemata if constipation occur, and in daily tepid spongings; to induce rest, lessen pain and promote repair, all by the use of the same derivative, detergent and stimulating measures, namely: cold compresses early and continuously—immersing the feet and legs in water at 96 to 100°, for 10 to 15 minutes, "at intervals of four to six hours, keeping the parts in flannel in the interim"; if corneal involvement theatens the application of a "fomentation made by a soft woolen cloth wrung out in boiling water, quickly folded in a similar dry piece and applied, and left one or two minutes, the process being repeated three or four times, the relaxing effect upon the surface ves-

sels is aided by passing ice over the skin or wiping with cold water between the applications." The application of daily mild massage completes the treatment outlined.

On the Citrate and the Lactate of Silver, Crede and their Employment in Private Practice.

Dr. A. Tilger, (Munchener Medicinisch Wochenschrift, Leb. 9th, 1897,) says: Immediately after the publication of Crede's paper on "Silverand the Silver Salts in their Surgical and Bacteriological Relationships" (Twenty-fifth Congrees of the German Surgical Society, 1896) which appeared towards the close of July of that year, I began to use the Citrate of Silver-von Heyden in the most varied cases. I was encouraged thereto by a long experience of good results from the employment of the constituent elements of the salt. The effects obtained with it were so entirely, I might even say so surprisingly satisfactory, that I consider it my duty to report them briefly. Meantime the remedy has become so well known, in Germany at least, and the methods of its use have been so clearly and thoroughly described by Crede in his essay, that I need make no general remarks concerning it. I might mention, however, the single drawback to its use, which is immediately noticed by all observers, and which, by the bye, it shares with the nitrate of silver; namely, the spots and discolorations that it occasions. It becomes less of an obstacle, however, the longer the salt is employed and the more perfect the technique of the user becomes. I had to pay my footing in the beginning. Latterly, however, I have had no occasion to employ the means that the Von Heyden factory recommend in the "Directions for the Removal of Silver Stains."

The following observations apply to the non-irritating, because with difficulty soluble (1:3800) Citrate of Silver, whilst I shall consider the special indication for the use of the readily soluble and somewhat irritant Lactate of Silver towards the close of this article. I have used the Citrate of Silver in some 50 to 60 cases of injury and minor surgical procedure, as they occurred in general practice; and the results have been such as to lead me to employ it exclusively in my surgical work. It is absolutely non-poisonous and non-irritating; it has powerful antiseptic and bactericide properties, which are undoubtedly exercised on the deeper tissues also; it has a favorable healing and cicatrixing effect on wounds, and, finally, it is readily applied, and it is cheap, since only the very thinnest possible layer need be dusted on. Since I use the Citrate of Silver I have not hesitated to close even non linear injuries with plaster after powdering them with the drug. Such wounds healed quickly and surely under a dry scab, and with a very few changes of the dressing. This is an item of personal importance to the practitioner, for every dressing means distusbance and loss of time to him. I may also remark that the style in which the Citrate of Silver is put up is very convenient; the small half ounce bottles take up but very little space and one can easily carry material enough to make 50 to 60 quarts of antiseptic solution. In this respect the antiseptic is far superior to all others for the emergency chests on railways, for travelers, vessels, and the military ambulance service. Tablets of both the Citrate and the Lactate of Silver for the purpose of making solutions are now in the market; thus making exact dosage easy, and taking the place of the more dangerous tablets of the corrosive chloride of mercury.

Besides the above more especially surgical cases, I have treated 48 special cases with the Citrate of Silver, and followed them up carefully. Of these 26 were affections of the sexual organs, including 2 cases of fissure of the nipple and 2 cases of inflammation of the navel in new born infants; and 21 cases were diseases of the mouth, throat, ear, and eye.

In the first group were 9 cases of acute gonorrhœa, which were all cured without complication in a shorter time than was possible by my former method of using the nitrate of silver in gradually increasing doses, and 5 cases of posterior urethritis, 4 of which were cured inside of four weeks, some of them having been previously treated for a lengthy period with the nitrate of silver and without result. In the fifth case there plainly appeared a symptom which Werler, in his

most recent publication, (On the Use of the Citrate of Silver in the Treatment of Gonorrhæa, Dermatology, Zeitschrift 1896) has cited as proof of the deep reaching action of the drug; on the day after the application there appeared an abundant discharge. Unfortunately, this caused the patient to leave me, though the urethritis was visibly improving. In a general way I can state that all these cases ran a quicker, and more especially a less painful course than those treated by the methods that I formerly employed. I do not give more exact figures, for the reason that the patients were all young men occupying subordinate positions, and the treatment had to be accommodated to their necessities. I could only occasionally do the irrigations myself, and had to permit the patients to inject themselves in the intervals. Contrary to the method pursued by Werler, I directed the patients to make a fresh solution each time for themselves; and rather strong ones 1:4000 to 1:5000 were employed from the beginning. By this method the patient can more readily obtain a warm solution for injection; a matter upon which I lay especial stress in the treatment of Gonorrhœa.

To this same first class belong also 6 cases of ulceration of the glans, penis and the prepuce, 1 of which was a chancroid, 1 a balanopostheitis, 3 herpes preputiales, and one an artificial ulceration of the glans caused by chemical action. In all these cases I used the Citrate of Silver in the powder form; the patients were directed to dust the sores with the Citrate and cover them with cotton once or twice daily, after first cleansing the penis in boiled water. In herpes especially, which is so very prone to return, the results of the treatment were excellent; and applied in time, it is even capable of aborting the attacks. The case of chancroid also healed in a remarkably short time; and I warmly recommend further trials in this direction. In this group I also treated two cases of puerperal endometritis. In both cases a single intra-uterine irrigation was followed by a prompt subsidence of the fever. Of course I mention these not very severe cases not so much on account of the therapeutic result, as to demonstrate that the intra-uterine use of solutions of the Citrate of Silver of the strength of 1 to 5000 may be employed without danger, and without causing any irritation. Of the remaining four cases of this group, 2 were cases of inflammation of the naval in infants; one was treated with the powdered Citrate, and the other with a Citrate of Silver ointment, and both were quickly cured. The two others were fissured nipples, one in a mother and the other in a wet nurse. Of these cases the second was a very aggravated and painful one; but they both healed with such surprising rapidity under compresses soaked in the Citrate of Silver solution, that I can recommend the treatment very warmly to the profession. The puerpera had had a similar affection at an earlier confinement; and she herself was surprised at the prompt action and entire painlessness of the remedy.

The 21 cases of the second group were divided as follows:

Stomacace, 1 case, with good result; suppurative follicular stomatitis, 1 case, in a child, cured quickly and painlessly with the Citrate of Silver; purulent alveolar periostitis, 3 cases, in one of which the antrum of Highmore was involved. In this latter case there was extensive implication of the periostium over the region of four teeth, and numerous sequestra came away later on; and the gargle of Citrate of Silver was used for over eight weeks. I mention this more especially because a dental colleague has objected to the use of this drug in the mouth on the ground that it blackens the teeth. I hear, however, that the dental profession in Germany has used it very extensively, and have found great benefit therefrom. The teeth at the site of the disease were discolored, and acquired a metallic silvery glance; but the deposit could be removed without very much diffculty with the tooth brush. This small and transitory cosmetic disadvantage is of no account in serious affections. The result in all these cited cases was an exceedingly satisfactory one.

There also belong here, 1 case of scarlatinal angina, 3 cases of follicular tonsillitis, all of which ran a very favorable course under the Citrate of Silver treatment, and 6 cases of chronic hypertrophic pharyngitis, in half of which marked benefit in the subjective sensations were obtained. In one case there

was a leukoplakia of the tongue of very long standing. The deeper fissures of the tongue have ceased to appear since the case used a Citrate of Silver mouth wash three times daily. The patient, a very intelligent gentleman, was so pleased with the "new remedy," that he used it of his own accord in a severe rhinitis, after cleansing the nostrils with a lukewarm saline solution he gave himself a nasal douche of a 1:4000 Citrate of Silver solution in the firm conviction that it would do him good. And indeed, the acute nasal catarrh had disappeared on the next day. I do not pretend to maintain that a universal remedy for rhinitis has been found by him; but I must admit that I have had good results in the few cases in which I have repeated the experiment. Perhaps some of my colleagues will try it on themselves or on a suitable patient. It is however in leukoplakia, so obstinate and so painful, that I would like further trials to be made with the remedy.

Finally, there belongs to this group 2 cases of purulent conjunctivitis, which quickly got well; and 4 cases of aural disease; otitis media purulenta, 2 cases, otitis media tuberculosa, 1 case, and otitis externa aspergillina, 1 case. Dr. Brugnatelli of Milan, whom I called in consultation in this last case, expressed himself as well satisfied with the fungus destroying properties of the remedy. He has used the Citrate of Silver in other cases of purulent aural diseases, and has informed me that he is much pleased with the results that he has obtained. In the tubercular otitis I insufflated the Citrate in powder for a long time. There resulted an undoubted decrease of the secretion, and that without any subjective difficulties appearing. The patient died from a pulmonary hæmorrhage, however, whilst the experiments were progressing.

I append to this report on the Citrate of Silver an account of a case in which I used the Lactate of the same metal. This salt is soluble in 15 parts of water, and causes a mild, burning pain when applied. The case was an advanced one of lupus of the fingers.

The patient was a woman, 47 years old, who had suffered for more than 5 years from lupus exulcerans of the right index finger, said to have appeared after a traumatism. In spite of the most varied therapeutic measures, including ointments, the use of Nitrate of Silver, cauterization, etc., by physicians of recognized capability, the disease progressed slowly but constantly. Amputation of the finger was finally advised, more especially as, in consequence of the destruction of tissue, and the long want of motion, complete anchylosis of the upper joint of the finger had occurred. As the patient could not make up her mind to the operation, she remained for a year without treatment other than chamomiletea and sublimate lotions which she applied herself. When on September 3rd, 1896, the patient presented her self to me, her condition was as follows: an ulceration 5 centimeters (2 inches) long, covered with fungous, spongy granulation, occupied the entire radial side of the right index finger, extending above almost to the metacarpo-phalangeal aticulation. The neighboring skin was cicatricial and shining; at the upper border of the ulceration were numerous lupus nodules. Sensibility intact. Joint between first and second phalanx anchylotic, and fixed in varus position.

I also deemed it requisite to propose amputation; but I determined to try a conservative treatment with the Lactate of Silver first. I began it with her consent, at once, by scraping away the fungous granulations with a sharp curette, and I found that the destruction of tissue had gone down to the bone. I then irrigated with physiological salt solution, and, after the hæmorrhage had stopped, dusted the Lactate thickly over the surface. There was a very moderate amount of pain for several hours and then complete cessation of all trouble, so that the patient passed a perfectly painless night, the first one that she had had for a long time. The Lactate of Silver was applied freshly every other day, and after the third application the base of the ulceration had taken on a normal appearance, and had began to granulate in a normal manner. Then I changed from the Lactate to the Citrate of Silver, dusting it on every second or third day. By October 16th, the large cavity had filled up, and was covered with a smooth scar. I have seen the patient from time to time since then, and she has remained cured.

I do not pretend to draw any far

reaching conclusions from this single case, more especially as I had put the patient upon rather large doses of Solveol at the same time; yet I must in the main credit the Lactate with the rapid cure. I shall certainly use it in future cases of the lupoid disease, and I think I can recommend its use to others.

I have been in the habit of using simple sterilized gauze over the applications. Latterly I have employed the silver gauze, recommended by Crede, but my experience with them is as yet to limited to permit me to express an opinion concerning them.

My observations agree entirely with the statements of Crede. I believe that the silver treatment of wounds will, in private practice, replace the aseptic method, which can hardly be carried out by the general practitioner.

Congenital Nystagmus.†

Dr. Joseph Elliott Colburn, of Chicago, contributed a paper on "Congenital Nystagmus," and the treatment of proper cases by correcting errors of refraction and operations upon the recti muscles and orbital faciæ.

The observations of Oglesby, Snell and others, among the miners, machinists, etc., who acquired nystagmic movements by being forced to use their eyes in unusual positions for a long time and in dim light, led him to study congenital cases from the standpoint of being caused by lowered visual acuity alone, or accompanied by atypic development of the dynamic and static appendages of the eye.

The fact that nearly all nystagmics who have a visual acuity of $\frac{20}{200}$ or better, have some one position in their range of rotation where the eyes are at rest, or nearly so, had long been observed.

Dr. Colburn concludes, from the study of 19 cases, that nystagmus when not of central origin, is due either to amblyopia or errors of refraction with or without perfect development of the retina and the central visual apertures. In those cases where the refractive aperatus is not normal the proper correction of the error will frequently lessen the movement, and if the remedy is applied early in life stop the nystagmic movements entirely.

In other cases with or without anomolies of refraction or accommodation where the motor oculi muscles are not typical in their development or function, or where the capsule of Tenon and the other orbital fasciæ are abnormal or contracted by improper nutrition, and spasmodic action may be suspended, and the excentric pose of the head corrected by orerations upon the proper muscles and fasciæ.

The result of the treatment was favorable directly as the rectinal musclar and suspensory apertures were subject to the correction.

The result of the treatment:

Secured central point of rest in twelve cases; central point of rest and cessation of nystagmus in eight cases; central point of rest and improvement of nystagmus in four cases; one case had small central post capular opacity, and was improved by correction of the error of refraction, One case of central scotoma in one eye, improved by correcting the error of refraction and muscle balance in the best eye.

The failures were two cases of Albinos with low vision, which could not be improved, and there was no point of rest.

Three cases of high myopia with extensive choroidal disease did not offer sufficient improvement of vision to warrant interference.

One case relapsed, there seemed to be secondary contraction of the capsule, and did not return for further treatment.

The treatment consisted in correcting the errors of refraction, advancing or retiring of check ligament, advancement or tenotomy of the recti muscles.

†Abstract of a paper read before the Oph-Otol. Laryn. and Rhi. Association, April 9, '97.

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Norwich Pharmacal Co.:

Gentlemen :—Unguentine has been given a place on my office medicine shelf. I care for nothing more effectual in all conditions indicating its use, such as ulcers, fresh burns, contused wounds, etc.

Very respectfully yours,
Patton Griffiths.

Hæmatherapy

The passing out of a century, an hundred years in the lapse of time, not only awakens new hopes, higher aspirations for the future, but alike gives us over to retrospection and retrointrospection, that we may select from the mass of events and from the lessons lived and learned the best among them for reference, guidance or use. To the thoughtful, who have not lagged by the wayside these kernals of the past have already been garnered up in some definite shape and can be ranged side by side for review. While we do not lay claim to superior capacity in the conservation of the good things this country has produced, still we have added our mite to its general progress and have watched with special interest many of its innovations, witnessing their acceptance or rejection in our search after knowledge, from the standpoint of the student rather than that of the connoiseur of human events. It seems to us that among all the achievements of the century in the line of therapeusis that of "hæmatherapy" has, perhaps, been the greatest and the best; the profession heretofore unable absolutely to produce, *per se*, good blood have enabled us through profound study and dilligent researches in this field—"hæmatherapy," to introduce it into the channels of circulation, or to supply the elementary substances in its make up by several routes and by well accentuated means.

It is doubtless true that the vegetable and mineral kingdoms, and the realm of applied chemistry have given us countless remedies of value in prophylaxis and the antagonism of diseases, but the grander and decper researches of biology—the study of the revelations of our cell life forces; operating within the blood—the life stream of the body, has resulted in far more direct and positive agents—restorative and at the same time vitalizing in their natures; reinvigorating the system and enabling nature to offer resistance to the encroachment or ravages of disease.

Hæmatherapy, blood-therapy, strictly speaking, is the treatment of disease with blood, confined now largely to the use of Bovinine, beef-blood, or blood dried and prepared from other sources, but the term comprises also the treatment of the blood fluid itself; its reconstruction or renewal, its cellular alteration and its constituent modification by the introduction of direct biological agents or substances derived from the blood, or the introduction into that fluid of chemical and other reagents capable of modifying its diseased and altered components, rendering them isomeric or identical with pure and healthy blood. The preparation used may be pure Bovinine or beef blood; it may be a substance derived from the glandular tissues of the guinea pig or other animal, or the isomeric nuclein of the yeast plant, as per process of Victor Vaughn, or may even be represented by a culture substance as those of Koch and Klebs, or even still the aseptalin of Eidson. It must be some substance directed to and introduced into the blood, exerting its known influence therein, directly upon that fluid so as to modify for the better, alter and purify, reconstruct or renew that fluid. The fact that some of the biological, chemical, and other substances so used, other than blood itself, are capable of exerting a power and influence upon the life stream equal to, or identical with the power and effect of the administered pure blood, thus bringing them within the perview of hæmatherapy. The objects aimed at and the effects produced are the same, or identical in nature. The paramount object is to energize, reconstruct and revitalize the life-fluid of the body, the blood, when it is altered or deteriorated either by disease or by faulty, functional activity somewhere in the organism. Hæmatherapy seeks to supply blood material; to aid in its regenation or restoration to the normal and to promote its cellular activity and regenerative forces.

It is now engaging the attention of the profession all over the world, and the next century will witness its full development. Taking its cue from nature it offers a simple and direct method of treatment to all physicians of whatever creed, and has been proven of such efficacy in consumption, chronic ulceration and other so-called incurable affections, yielding such strikingly favorable results as to win acceptance and a justly hopeful trial. Indeed, he who would not be found lagging behind his fellow in the coming Century had best study closely its true physiological applicability and its general

therapeutical bearings, and withal should supply himself with cabinet of these biological agents and blood preparations. The theory is so palpably clear, so true to the teachings of nature and so replete in generous results that its wisdom is self evident. Usually a new idea, an innovation or medical discovery percolates but slowly into the professional brain, and oft times the profession refuses clinical trial of a new remedial agent, because it antagonizes fixed theories or displaces remedies that have become axiomatic from customary use. For years the Drs. Cutter have labored, in and out of season, endeavoring to benefit humanity by pressing acceptance of their method of treating and curing consumption, mixedœma, and other chronic, wasting disease, by forced feeding, the use of concentrated, nitrogenous foods—their absolute, clinical demonstrations of success have gone almost unheeded so far as general clinical application is concerned, but the principle they sought to inculcate has lived. Their successes, and the tangible evidences produced by others laboring along the same or similar lines, have demonstrated the biological fact that the vital principle can live, can survive apart from the living organism. Not only the material elements of the blood, but agents that excite its cellular activity and renew its vitalizing pabulum can be prepared, kept apart and indefinitely conserved to be introduced on proper occasion.

The famous "testicular elixir," with its rejuvernating powers thrown directly into the blood stream in effect favored metabolism and the renewal of pure, healthy blood, thus invigorating the system. The "tuberculin" of Koch, and "antiphthisin" of Klebs, in emasculating and destroying the inimical baccilli, deterred their activity and checked their devitalizing powers, enabling the life fluid to hæmoglobinate its corpuscles and coursing through its pathway distribute energizing oxygen to tissue cells throughout the body. The "nucleins" of Vaughn, taken from glandular tissue, or from the cells of the yeast plant, and introduced into the blood, serve to arouse into activity and proliferation the white corpuscles, natures white batalion and natural defenders, against the advance and havoc of alien germs. Thyroid feeding and the injection of preparations of that gland, whether taken from the wooly sheey of the Netherlands, or the lamb of Tuscany, are equally specific methods of blood therapy, used for the relief and cure of goiter, myxodema, and allied diseases, have given results that could not be expected from older, more orthodox, lines of treatment. The normal salt solution of so much value in shock and sudden or excessive loss of blood, will quickly supply the necessary power of reaction or the volume of fluid, placing within the life stream a fluid identical with or isomeric to the serum of the blood, having the same power to excite its onward coursing of the channels, stimulating cardiac and respiratory centres, and preserving life with equal efficacy with transfusion or the supply of absolutely pure blood. These are all accepted facts, involving the true principles of hæmatherapeutic methods; all alike meeting the conditions of failing life, or altered and destroyed tissues that confront us in disease, in all the ailments and ills the flesh is heir to. Blood supply, reconstruction, and blood feeding of the system in its perverted, injured and necrosed parts constitutes in the main "hæmatherapy."

If we want a life stream replete with fighting leucocytes, or filled with the red artillery of oxygen, before which alien germs go down in death, and septic matter dissolves as in foam, and from whose active vitality billion billions of bacteria must melt away, we have only to introduce some one of these hæmatherapeutic remedies, and the flow and ebb of such a stream is begun. Only the clinician or practitioner who has faithfully tried hæma therapy can realize its potent influence and beneficient effects; while the standing need we have felt for revitalizing agents required in a class of chronic diseases in the continuous fight nature must make with lingering ptomaines and other diseases, products is largely met by them, the recuperation of the blood, the restoration of lost continuity of tissue and the enhanced natural antitoxination of the human system gives the method a strength and rational fitness that must overthrow prejudice and opposition from all sources. Because of these facts the writer is glad to note that the "American Association of Physicians and Surgeons" established means at its Free Post Graduate School, at Indianapolis, for teaching blood ther-

apy, or at the Indiana General Hospital building, which is attached to the former, providing lecture rooms, laboratory, &c., all being done under the inspiration and lead of Dr. T. J Biggs, of New York, the chief constructor and spirit of a system of expository and clinical lectures which is to follow. But recently a notable meeting of members from this learned Association and prominent visitors from various countries was held in these lecture rooms, and addresses on the subject were had from many eminent men. This meeting it is claimed was mainly significant, because of the "national, international and universal medico scientific basis of the Association and college, inaugurating it, comprehending members, professors and students in all branches and schools of medicine from America and abroad." This Association is to hold its next annual meeting in Milwaukie and will have a section on hæmatherapy, with Dr. T. J. Biggs as chairman, while lectures and clinical demonstrations on hæmatherapy is to be made a distinguishing feature of the college in the future. It seems to us to evidence a new era in medicine, one from which great good may be expected. Success in this method will require attention to detail and strict observance of technique. You should summarize the conditions, calling for its use, familiarize yourselves with its technique and detail. It does not consist in ordering a patient to try one of the newer biological substances, or in directing him to buy a bottle of "bovinine," but under your careful and continuous supervision the treatment suitable to each individual case must be assiduously applied.

It is certainly an inviting field for the therapist—one that substitutes the probable sustenance and re-awakening of the vital forces for the possible lethal havoc played among them by many of the older antiseptics and antitoxines. From the emenations of this Century it will in the next, do doubt, hold its own well up among the survival of the fittest.

Pelvic Suppuration.

Dr. Jacob C. Rutherford has a paper on Pelvic Suppuration, in the Atlantic Medical Weekly, in which he advocates treatment by the vaginal route, gives a list of conditions in which this plan of treatment is preferable to treatment by celiotomy, and reports cases.

Dr. Rutherford thinks that as generally accepted, the term pelvic suppuration indicates the presence of pus in the pelvic cellular tissue. He believes a broader interpretation of the term should obtain so that it would apply to an accumulation of pus in any of the pelvic tissues or organs. This application of the term shows the necessity of stating more explicitly the condition present in a case of pelvic suppuration under consideration; that is to say, a pyosalpinx rupturing into the broad ligament should not be reported as a pelvic abscess, neither should a tuberculous ovary discharging into the bladder be reported as purulent cystitis.

He contends that collections of purulent debris from malignant growths, or from disintegrating neoplasms, cannot, strictly, be classified as pelvic suppurations; for although they undoubtedly excite inflammatory action in the surrounding tissues, thereby adding to the amount of pus discharged, they are, more properly speaking, necroses rather than suppurations. On the other hand, purulent vaginitis is pelvic suppuration.

He believes that pelvic suppuration is the sequel of pelvic inflammation, and that pelvic inflammation is, in the majority of cases, the result of either septic or specific infection, and quotes William Duncan as saying that "almost all cases of peritonitis occurring in women, apart from labor, are most likely secondary to specific infection from gonorrhœa."

In his opinion the treatment of pelvic suppuration depends upon the organs involved and the condition surrounding those organs, and in all cases the evidence should be carefully weighed before deciding whether to remove the diseased organs by celiotomy or to treat by vaginal incision and drainage.

Supplementing Manton he gives the following list of conditions in which treatment by the vaginal route may be preferable:

1. Cases in which the radical operation is positively refused by the patient or cannot be undertaken for other reasons.

2. Cases in which the physical condition of the patient is such that celiotomy, if performed at the time, would certainly prove fatal.

3. Puerperal cases in which the pus is wholly extra-peritoneal.

4. Cases in which there already exists a fistulous communication between the pus sac and an adjoining viscus.

5. Cases in which the radical operation is not justified until conservative treatment has failed to effect a cure.

Dr. Rutherford reports two cases of his own, one of pelvic abscess from a pyosalpinx rupturing into the broad ligament. An incision was made in the vaginal route and several ounces of stinking pus discharged. The subsequent treatment consisted of irrigation with an antiseptic fluid and drainage. The fistula closed in about two months, and the woman is now in excellent health. The other was a case of pyosalpinx from septic infection. This case was treated by uterine drainage, the enlargement entirely disappearing in four weeks, and the woman has had no trouble since. He also quotes a case of ovarian cyst, communicating with the rectum, reported by Cripps, in which the tumor was removed by celiotomy and the sac drained by the vagina. Although flatus and fæces escaped through the drain tube for several days, the woman made a good recovery, and returned home in about two months.

In conclusion Dr. Rutherford says that it is not the purpose of his paper to condemn celiotomy in pelvic suppuration, for many times it is imperatively demanded; but rather to call attention to certain conditions of the disease in which less heroic treatment will give equally gratifying results.

A Synopsis of a Case of Osteo-Myelitis Mistaken for Rheumatism.

About the middle of October, 1894, I saw Jos. M., age 9, U. S. German descent. He complained of much pain in all joints, especially those of lower limbs. No local points of marked tenderness. Onset gradual, fever high, pulse rapid, and the usual symptoms found in all fevers. Diagnosis, rheumatic fever, and salicylates prescribed. Under this treatment slight abatement of symptoms noted. Emaciation very rapid under the high fever, and about the tenth day, after close examination with the patient stripped, a slight fullness was detected about the middle and inner side of thigh. Aspiration showed pus and the abscess was opened, drained and packed. The cavity was quite large with a sinus extending upward and toward the hip joint. There was abatement in symptoms of a decided character, but the sinus remained open, and on Nov. 16th, 1894, four or five weeks after the original diagnosis, there remained this sinus, and much swelling about the hip joint with redness and enlarged veins. The sinus, on exploration, led to the hip joint and discharged a moderate amount of blood and pus. Externally was a small opening, readily admitting a probe. The appetite was excellent, but nourishment poor.

This boy of nine years presented an "old man's skin," *this* standing up in folds on pinching it. The hair was thin and scraggly; urine light, odor normal, neutral. Sp. gr. 1022, no albumen, no sugar. Cryst. oxalate of lime, wound dressed dressed daily. Pus examined and no specific germs found. Patient kept in bed.

After consultation, Nov. 26th, it was decided to open up sinus and examine curettings. Osteo-sarcoma suspected. Sinus was laid open two days later and curetted up to and beneath a volume of bone. Involucrum found and a process of bone inflammation simulating tuberculosis. Curettings pronounced tubercular. Wound packed with iodoform gauze. Ten days later preparations were made for exsection of hip joint. Semilunar incision made over great trochanter, extending upward and above the joint. Pus cavity found involving the space externally extending from greater to lesser trochanter going through the sinus to the inner side of femur.

The joint was found not involved. The whole cavity was laid open, curetted and packed with iodoform gauze. Daily dressings, removal of sequestrum, approximating edges of wound, application of Buch's extension, incision of small superficial pus pocket, and later, application of side splints promoted a gradual recovery, and Feb. 23d, 1895, found the patient able to go on crutches. He had lost the signs of malnutrition to a great degree. Sayre's side splint or brace was applied and worn for about three months, since which time the patient has been absolutely well.

In this case there was no tubercular history in the family, neither was there history of injury. The case proved one of acute osteo-myelitis, involving the shaft of the femur.

HENRY T. HOTCHKISS,
Brooklyn, N. Y.

Glioma of the Retina.‡

Glioma starts in the neuroglia of nerve tissue only, thence it involves other tissues by extension. It is the only tumor originating in the retina. It is limited to early life, being most frequent between two and five years of age. It commonly involves one, but sometimes both eyes. It is not peculiar to very fair children, as has been asserted, but is found in dark complexions and in negroes. A yellowish white reflex from the pupil is often the first evidence of its existence. The ophthalmoscope is the only sure aid to early diagnosis. The prognosis is always serious. If it once invades the orbit, or extends backwards along the optic nerve, the result is almost necessarily fatal. Recognized early and the eye-ball removed, recovery is frequent. Fortunately it is a rare disease.

In more than ten thousand eye cases treated by the author, he met with five cases of glioma. They were, respectively:

1. A fair skinned girl, aged 3 years—a fungating mass, size of walnut, protruding between lids. Removal. Glioma cells found in cut end of optic nerve. Recurrence in brain and death three months after operation.

2. A two and a half year old boy, brunette, blind in both eyes. Secondary irrido-cyclitis and occlusion of pupils. Diagnosis from history. Removal of both eyes by another surgeon. Child seen and examined by the author five years later. No recurrence.

3. Negro child, aged 3½ years, enlarged and protruding globe, resembling panophthalmitis. Diagnosis, glioma of the retina, involving all the ocular tissues, proven by microscope after removal. A commencing glioma found in the other eye. The child died of cerebral involvement about three weeks later.

4. A very fair girl, 4 years old—enormously large right eye, a metastatic tumor in the right temporal fossa, and another under the angle of the right jaw. Extreme cachexia. Operation declined. Death by exhaustion a few weeks later.

5. A boy with dark hair and eyes, 7 years old, strabismic for some months, for which a tenotomy had been performed. Examination revealed a blind eye from glioma of the retina situated near the ciliary body. Eye removed by another surgeon and final result not known to author.

‡Abstract of a paper by Dr. T. E. Murrell, published in the Denver Medical Times for February, 1897.

Treatment of Certain Corneal Lesions by Hydraulic Curetting with Sublimate Solutions,

Traumatisms, ulcers, and abscesses of the cornea, will always possess a vast amount of interest to the general practitioner as well as to the eye specialist, and Dr. Thomas H. Pleasants, of Helena, Montana, in a paper read before the "Western Ophthalmological Association" at its annual meeting at St. Louis, April 8th and 9th, describes a method of treating these lesions, which he has used for the past eighteen months, and states that the percentage of perfect recoveries of vision, resulting from its use, is greatly in excess of that which results from the use of any other method which has ever been advocated, and out of the large number of cases treated during that period he gives the detailed history of three cases, each one being a representative type of its class.

He disclaims the credit of originating the treatment, the honor of which he ascribes to Dr. Santarnecchi, of Cairo, Egypt, but, acting upon a suggestion received from reading an article on Hydraulic Curetting," by this distinguished ophthalmic surgeon, he has amplified his methods and likewise increased the range of its applicability.

The technique is simple, and the apparatus easily within the reach of any country practitioner, who may be equipped with a large hypodermic syringe, and a 4 per cent. solution of cocaine. He needs

also some bichloride of mercury tablets, and perhaps a solution of atropine. After first "cocainizing" the eye, to better enable the patient to stand the pain of the operation, he opens the lids as widely as possible, fills the syring with a 1 to 1000 solution of bichloride of mercury, sometimes a weaker solution, 1 to 1500, or 1 to 2000, occasionally 1 to 3000, and, assuming that he is using a hypodermic syringe, he must grind off the sharp point of the needle, he now directs the stream against the ulcer, not at right angles with its base, but obliquely, gradually increasing the force of the current, until he has removed, as thoroughly as it is possible, all the necrotic soft tissue, thereby placing the ulcer or abscess in the very best possible condition for recovery. If there is any tendency to the development of iritis, he uses atropia with cocaine, a few drops after the operation of curetting is through, and if there is very much pain following the operations, the instillation of a few drops of 4 per cent. solution of cocaine is made, together with a compress of hot boric acid solution. The pain usually subsides in a few minutes. The eye is then sealed up with an antiseptic dressing, the patient is instructed to remain quiet, and the bandage is not disturbed for 24 hours, unless there should be some urgent reason therefor. According to the severity of the ulcer, or abscess, the operation is repeated next day or the second day. Usually, where the pain has been constant before the operation of curetting, it is now absent entirely, or to a great extent.

Dr. Pleasants, in his paper, states that he has universally applied the sublimate solution with the syringe to injuries, recent ones of the cornea, particularly where the foreign body is ascertained to be iron or steel, from the fact that such a large number of cases of traumatism of the cornea by the lodgment of particles of iron become infected, and result in ulcers or abscesses. He has never, since he adopted the practice, had a single case of ulcer or abscess follow the extraction of iron or steel. The method is certainly worthy of the highest consideration, and in closing, its author expresses the sincere hope that hydraulic curetting with sublimate solutions for corneal lesions may take the place of the practice so frequently adopted of prescribing eye lotions and trusting to luck for the balance.

Local Treatment of Chronic Gastric Catarrh.†

Local treatment may be applied in any stage of chronic gastric catarrh; but it must be varied somewhat in the different stages. The grade of inflammation, its character and persistence, likewise may require some modification of the treatment.

First Stage.—During the incipiency of chronic gastritis, local treatment is not so essential except in bacterial cases, but is beneficial. It serves to modify the congestion when that is increased, and often allays dyspeptic symptoms even when they are more marked than usual. The use of warm water (105°) with bicarbonate of sodium (three per cent.) for washing out the stomach is frequently very valuable to remove the tenacious mucus usually adhering to the gastric mucous membrane, in this condition, and interfering with the proper mixing of peptic fluid with the food. The patient may drink a glassful of the solution before meals or it may be introduced into the stomach through the tube. If the tube is used, the stomach should be filled before allowing any reflow. The cold douche with water at 80° to 60° is sometimes more grateful and helpful than the hot douche (110° to 125°). A continuous effect may be secured by using a double tube and permitting the inflow and outflow to progress simultaneously; but care should be taken to keep the stomach distended sufficiently to have the solution come in contact with the entire gastric surface. The soda solution dissolves the mucus and the stream washes it away. Weak soap-suds may be used with the tube for the same purpose. More satisfactory in many instances is the use of a solution of Hydrozone. A glassful (fl ℥ viij) of a two or three per cent. solution may be given half an hour before meals. If used as a douche with the tube a five or a six per cent. solution is not too strong and two quarts the minimum amount. These douchings may be given one to six or seven times a week, according to the requirements of the case, and are frequently all the treatment this stage of chronic gastritis de-

†J. M. G. Carter. M. D., in American Therapist.

mands, except what changes are necessary to diet.

Second Stage.—The inflammatory process is fully developed in the second stage and while there may be weeks or months when there is little if any suffering, the treatment should be persistent. The cleansing of the gastric mucous membrane must be systematic and thorough. This is best accomplished with a solution of green soap or a five or eight per cent. solution of Hydrozone, introduced with the double tube. After first filling the stomach, inflowing and outflowing streams ought to remain about equal or the outflow may exceed the inflow, the distension of the stomach may be maintained by retarding the reflow when necessary. This process can be beneficially accomplished by driving the solution into the stomach under increased air pressure; but when the proper apparatus for this method is not at hand the siphoning method with the single tube does very well. For home treatment or when the tube cannot for any reason be used, a solution may be made for drinking. For this purpose a 2 or 3 per cent. solution of Hydrozone is prepared. The patient may take a glassful (8 oz.) half an hour before meal time. He should lie down at once, remain five minutes on the back, then turn on the right side where he must remain during the remainder of the half hour. While the patient is on the back the solution comes in contact with every portion of the gastric mucous membrane and turning to the right side facilitates the emptying of the stomach. By this process the offending mucus is dissolved and carried away and the organ is put into a proper condition to digest food. The use of Hydrozone has the ad ditional advantage of checking the growth of the bacteria, and probably exhibits greater antiseptic properties than any other agent that can be used in the stomach with the same degree of safety. In obstinate cases this cleansing ought to precede every meal.

After the stomach is cleansed it should be treated with soothing, stimulating and healing applications. There are many preparations which can be so used, some of the best of which are glycerole of bismuth and eucalyptol, the essential oils and Glycozone. Boric acid in 2 or 3 per cent. solution as a wash with the tube is sometimes very valuable. The other agents mentionee may be used with a nebulizer by means of which a vapor impregnated with the medicines can be passed into the stomach through a tube, the double tube being preferable. If it is not convenient to use a nebulizing apparatus, the glycerole mentioned, and especially Glycozone, may be administered by the mouth. In many cases, in fact, the latter mode of administering these agents is more desirable. These remedies encourage healing and materially enhance the patient's prospects of recovery. This is especially true in bacterial cases. When Hydrozone has been given before meals as already suggested for cleansing purposes, Glycozone may be administered in teaspoonful doses after meals with very satisfactory results. This line of treatment is frequently so successful that cases are temporarily relieved and possibly often a cure effected, particularly if the general treatment has been judiciously carried out

If, for any reason, Glycozone cannot be employed the essential oils may be used. The oils of anise, peppermint, cubebs, and tar may be combined and used with a nebulizer as previously suggested. Although benefit may be derived from the administration of this combination, I prefer the Glycozone treatment. The use of hot water, 120° or more, and the employment of cold water, 80° to 40° (F.) may give very happy results in certain severe cases.

Third Stage.—The condition referred to here is one of atrophy. The functions of absorption and motion may be fairly well performed. The chief difficulty then is with the digestion of proteids. The local treatment has two objects, mainly, although a third is sometimes in mind. The first object is the removal of debris and foreign material. The second is the cleansing of the mucous membrane and the destruction of micro-organisms and their removal in order that the intestine may not receive bacterial products from the stomach. The third object sometimes kept in view in the local treatment by douching is a degree of stimulation of the functions of motion and absorption and the tonic effect to the gastric walls which follows those washings. The first object is accomplished by the use of sterilized water or a 3 per cent. solution

of sodium bicarbonate. Either tube may be used, The second object is effected by douching the walls with a green soap solution or a solution of Hydrozone. The latter agent in 5 per cent. solution as directed above gives very pleasing results. The third object may be secured by using hot or cold water for the douche.

100 State Street, Chicago.

The Therapeutics of Benzosol.†

Among the numerous synthetical preparations which have been recommended to the medical profession in the last few years, there have been some which have peoved of undoubted value as remedial agents, while others after a brief notoriety have been found to be inefficient, and are remembered only as chemical curiosities.

Some of the most important productions of the chemist, from a medical standpoint, belong io the salol group, one of the most valuable members being benzosol, the synonyms of which are guaiacol benzoate and benzoyl guaiacol.

As the names would indicate, benzosol is a combination of guaiacol and benzoyl. It is of definite chemical composition and free from creeol bodies, appearing as a colorless, tasteless and odorless crystal line powder, almost insoluble in water, but readily soluble in ether, chloroform, and hot alcohol. It contains 54 per cent. of guaiacol.

The drug is unaffected by the gastric juice, but when coming in contact wtth the alkaline juices of the intestinal canal it is brohen up into guaiacol and benzoic acid. It is quite rapidly eliminated in the urine as combinations of these substances. The salivary and sudoriparous glands share to a considerable extent in the ex cretory process.

It is reasanable to suppose that a drug which, after reaching the intestines, is resolved into two such active medicinal agents as guaiacol and benzoic acid, should possess a wide range of therapeutic value. The remedy possesses advantages over either of its parent constituents in being tasteless and odorless, and in the lessened disturbanee of the digestive functions which it occasions.

†Butler in American Therapist.

My first experience with this medicament was in the treatment of pulmonary tuberculosis. In the autumn of 1892 I was called to see a young lady, twenty years of age, who had been suffering from consumption for nearly a year. The patient was confined to her bed, and had a distressing cough associated with an abundant expectoration of a muco- purulent sputum rich in tubercle bacilli. She was markedly emaciated, and had in evening temperature which not infrequently reached 103° F., with troublesome night-sweats.

Behzosol in doses of 5 grains (.32 gm.) was administered three times a day, increased in the course of sixty days to 10 grains (.64 gm.) three times a day, and Elixia of Three Chlorides (Aenry's) one fluid drachm (3.7 cc)· three times daily.

The patient toook the last named preparation for about four months, when it was discontinued. The benzosol, however, was administered steadily for over a year. She improved rapidly, so that by the following spring she was able to leave her bed and attend to some light household duties. She continued to gain in flesh and strength, her fever and night-sweats ceased entirely, and only in the morning was she troubled with cough, not severe, accompanied by a scanty expectoration.

The winter of 1893 and 1894 she spent in Indiana, returning to Chicago in the spring of 1894. No subsequent visit was made until the following October. when typhoid fever had supervened from which she died.

The success with the drug in this case induced me to employ it in the treatment of many tubercular patients and, while they have not all yielded to its influence so well as the case cited above, I am satisfied that the drug has acted beneficially in every instance. In two cases of tuber cular peritonitis, the drug associated with arsenic proved of the most decided benefit.

To many tubercular patients the remedy has been administered at intervals associated with cod-liver oil and hypophosphites, but careful observation has demonstrated that tubercular patients improve more rapidly when benzosol is given regardless of any other medicament employed.

I am convinced that the drug possesses decided advantages over creosote. First, it may be given in increasing doses with less gastro-intestinal disturbance; second, it appears to have a more favorable influence than creosote over hemoptysis.

Under its influence the breathiug grows calmer; there is increrse in weight, with an improvement in the appetite; while there is a diminution of the bronchial irritation and secretion; the hectie abates, and life is prolonged.

Perhaps it may not be superior to guaiacol carbonate in tuberculosis, but experience with this drug has not been sufficient to make an intelligent comparison, benzosol proving so efficient that I have seldom been tempted to substitute for it any other guaiacol preparation.

In the majority of instances, the diarrhea, which so frequently attends both pulmonary and intestinal tuberculosis, is checked more readily by benzosol than by any other remedy.

In one case of tuberculosis of the bladder it appeared that the symptoms were somewhat allayed for a time under the internal administration of benzosol, but whether the slight transitory improvement was due to the drug or not I am unable to say. The remedy is certainly of great value in chronic bronchitis where the bronchitic element is strong, with excessive expectoration, and in bronchorrhea.

During the last two years I have given the drug extensively as an intestinal antiseptic, and as such it is peculiarly efficient.

The first time I used it for this purpose was to combat an offensive diarrhea in a case of puerperal sepsis. Five grains (.32 gm.) were given every two hours for the first twelve hours, and subsequently every three hours, with excellent results.

In two cases of chronic diarrhea persistent for a number of years, benzosol produced a cure.

While I resort to very little internal medication in typhoid fever, it seems occasionally advisable to administer some intestinal antiseptic, and having tried them all, including the Woodbridge treatment, benzosol alone, or associated with bismuth salicylate (basic) where there is much diarrhea, seems as beneficial as any drug exhibited.

The remedy will almost invariably benefit patients suffering from acute intestinal catarrh. During the summer months a large number of infants afflicted with acute dyspeptic diarrhea of bacterial origin are treated. As is well known one of the principal indications in the treatment of this disease is to prevent intestinal decomposition; and for this purpose the drugs that have proved the most valuable in my practice are benzosol, bismuth subnitrate, and zinc sulphocarbolate. I am more partial, however, to the first mentioned drug in these cases, although occasionally benzosol and bismuth together prove serviceable.

Obviously, there are many difficulties attending perfect intestinal antisepsis. Certain drugs are too poisonous if given in sufficient amount to destroy microorganisms in the intestines; some are soluble, so that they are absorbed from the stomach and small intestines, having, therefore, no, or but very little, influence on the large intestine. The available insoluble and efficient remedies are few, and many of them irritate the stomach or have the disadvantage of possessing a disagreeable odor or taste.

Of the pleasant, non-irritating and efficient intestinal antiseptics, the following are undoubtedly the best: benzosol (benzoic acid and guaiacol), benzonaphtol (benzoic acid and naphtol), Kresol (salicylic acid and kresol), calomel, and bismuth subnitrate.

Intestinal indigestion and auto-intoxication are subjects which require more consideration by physicians than is usually given them. Many conditions which often puzzle a doctor are but the result of the absorption of large amounts of certain by-products of digestions, produced by the action of certain micro-organisms found in the intestines.

For the purpose of destroying or rendering these micro-organisms innocuous and preventing the development and absorption of ptomaines, it is necessary to resort to the administration of intestinal antiseptics.

I have very recently discharged a patient who consulted me on account of "headache and fever." He complained of headache, general malaise, and loss of appetite. The bowels were constipated some tympanites, and tenderness over the abdomen, and a temperature of 101°. He had been previously well, and there were

no evidences of tubercular, nervous, hepatic, or malignant disease.

Typhoid fever was suspected, and Widal's test was made with negative results. An examination of the urine, however, disclosed a large amount of indican. In the absence of other findings, therefore, the cause of his symptoms were thought to be due to intestinal putrefaction. The patient was accordingly given an active saline cathartic, and full doses of benzosol every three hours. In twenty-four hours his temperature subsided; his headache was relieved, and he declared himself well. The urine at this time showed no trace of indican. A busy practitioner scarcely passes a day without finding it necessary to prescribe some intestinal antiseptic, and from quite an extensive experience with drugs of this character I can conscientiously recommend benzosol as a peculiarly efficient intestinal antiseptic.

In cystitis, the inflamed cystic mucosa is greatly relieved by the internal administration of benzosol. The improvement is particularly marked after the urine become ammoniacal. It quickly renders the urine acid in reaction and maintains its acidity. In these cases the daily ingestion of benzosol prevents any tendency towards the formation of concretions of ammoniaco-magnesian phosphate. The drug is quite as efficacious in lessening the acidity of urine due to an excess of uric acid.

Possibly on this account benzosol has been recommended by some authorities in the treatment of acute articular rheumatism, although my experience proves it to be much inferior to the salicylates.

In certain cases of incontinence of urine due to irritability of the lining membrane of the bladder, where there is no abnormal condition of the secretion, this remedy frequently serves a useful purpose.

I am familiar with a case of chyluria, although not occuring in my own proctice, apparently markedly benefitted by the internal administration of this drug.

Some time ago, a gentleman examined for life insurance disclosed a slight amount of albumin in his urine. He subsequently put himself under my care, and a closer study of the case and more exhaustive urinalyses showed that invariably the urine which he passed upon raising in the morning was negative, but an analysis made during the day, after he had lunched or dined, particularly if he had been actively at work, showed that the urine contained an appreciable amount of albumin. Repeated microscopic examinations failed to show casts. This fact taken in connection with the normal condition of his heart and blood vessels and the tendency to gastric fermentation and acidity of the stomach, induced the belief that the kidneys were not involved, the albuminuria being simply the result of imperfect digestion of albuminous substances absorbed from the intestine. Believing that if such were the case the patient should be relieved by correcting gastric and intestinal indigestion and lessening fermentation, benzosol and Maltine with Wine of Pepsin were prescribed with the result that the albumin permanently disappeared from his urine in a few weeks.

I am satisfied that many cases of albuminuria are the direct result of intestinal indigestion; and it is reasonable to suppose that a line of treatment similar to that indicated above would prove of decided benefit.

Benzoic acid has long been considered an efficient cholagogue, and in combination with guaiacol, in the form of benzosol, it has seemed, in some cases to increase the functional activity of the liver. Probably on account of its supposed property of augmenting the glycogenic function of that organ, it has been recommended in diabetes mellitus. Recently there have been numerous articles on the efficacy of benzosol in the treatment of this disease by men whose reputation and experience lend to their words authoritative weight.

I have had an opportunity to try the drug in only four cases of diabetes, and regret to say that in those cases there was no appreciable diminution in the excretion of sugar. Its use, however, in such cases is not disparaged, for there is a decided preponderance of competent testimony in its favor. It is used empirically, of course, in diabetes, as it is not known whether its favorable action is due to its influence upon the liver, pancreas, blood, or nervous centers.

In reviewing the therapeutics of benzosol, the intention has been to record only my personal experience with the drug, and my conclusions are that its most im-

portant uses are, as an intestinal antiseptic and as a remedy of great value in certain forms of tuberculosis.

Four Standard Remedies.

(The medicinal effects of which, physicians may fully rely on.)

Dioviburnia. The most powerful and trustworthy uterine tonic attainable, (of which the most eminent gynecologists bear testimeny) in dysmenorrhea, amenorrhea, menorrhagia, leucorrhea, subinvolution, threatened abortion, vomiting in pregnancy, chlorosis, etc.

Neurosine, the standard neurotic, anodyne and hypnotic, unexcelled in hysteria, epilepsy, neurasthenia, mania, chorea, uterine congestion, migraine, neuralgia and all convulsive and reflex neuroses, containing no chloral or morphine.

Palpebrine, is what the name would indicate, a most reliable remedy for external eye diseases, highly recommended in simple, acute and chronic catarrhal, venereal, blenorrheal and strumous or scrofulous conjunctivitis, marginal blepharitis and inflammation of the lachrymal sac and other external inflammation of the eye. Palpebrine in the hands of the general practitioner will enable him to treat successfully the external affections of the eye without having to send such cases for treatment to the specialist.

Sennine, is unexcelled as a dry antiseptic dressing and is a specific in the treatment of old sores, ulcers, bubo, Eczema, pruritus, burns, scalds, etc., wherever a dry antiseptic dressing is applicable, being entirely odorless will save both the practitioner and the patient disagreeable odors as well as those they come in contact with. Sennine is a very fine white powder put up in two oz. perforated top boxes, making it convenient to apply upon wound surface.

These four products are manufactured by the Dios Chemical Co., which is sufficient guarantee that they are entirely reliable and contain such drugs as the formula of each indicates, which they freely circulate to the profession only.

Dr. S. G. Webber of Boston, has an article (Boston Medical and Surgical Journal) on excessive physical exercise as a cause of nervous exhaustion. He has had a number of patients who had an idea that if they exercised much, they could do better mental work, when they had not the strength for both physical and mental exertion carried to the degree they desired. So much attention is given now to athletics and athletic contests are so prominent in the minds of youths of both sexes, that young men in college and preparitory schools are in danger of attaching too great value to physical exercise as a means for aiding them to keep up their strength and to do better work in the study, and in the class room; hence the practice of some students of not very robust constitution trying to increase their strength and ensure their passing creditably through college by taking an undue amount of exercise. No gymnastics which overtax and strain the growing youth in muscle or joint, wherein the difference in natural strength and development of individuals are not taken into account are safe. The advance in exercise should be gradual until each has reached the limit of his normal capacity and is in the condition to do the best work in all departments of life. His plea is, for the family physician to guard the children from unwisely overtaxing themselves. He mentions several cases where unwise exercise, excessive for that individual, had been the sole apparent cause of a breakdown, or an important factor in causing nervous prostration. He believes that solitary gymnastics is less useful, is much more likely to give rise to evil results, than class work wherein, there is more recreation from the pleasure of exercising with others, in which also there is less uninterrupted continuous exercise. He is also an advocate of music in gymnastic work as being exhilerating, enlivening and giving more recreation.

I have prescribed Bromidia with pronounced success in several cases of nervousness and restlessness, and in one case of acute cystitis. I have combined Papine with Bromidia which gave instant relief. Parenthetically, I may say I have personally used a teaspoonful of Bromidia, after having successively lost several nights rest and procured a refreshing night's rest with no bad after-effects.

CHAS. E. QUETIL, M. D.
Philadelphia, Pa., Feb. 23d, 1897.

The Causes and Treatment of Epilepsy.†

Modern science recognizes and describes several divisions and irregular forms of epilepsy, but, as only the causes and treatment of Idiopathic Epilepsy will be touched upon, the description and symptoms of the various divisions and classified forms, from the more familiar types, to the marked and various irregular varieties, with all their different stages will be passed over. It is universally admitted, that the pathological nature of epilepsy, is clouded in obcourity. Authors have not arrived at positive conclusions on this subject. True, different organs have been found to be affected, but these lesions are only, 'Supposed to exert an influence in the production of the disease."

There are more speculative theories than demonstrated facts, and the pathology of epilepsy is surrounded with so much obscurity, that it gives one practically no clew to any of the causes of this disease. There are at times, conditions which, when magnified, are exciting causes of epilepsy, especially when the epileptic constitution exists. Of some of these conditions, I wish to speak. According to Rosenthal, Brown Sequard, Hare, Hamilton and others, by far the greatest number of cases, begin between the ages of ten and twenty years. This is the period of reflex irritations. Irritations of the bladder and the sexual system, especially phymosis and adhesions of the prepuce. Ovarian irritations, the commencement of the menstrual function and the suppression of the vaginal fluxes. Exanthemata, peripheral lesions involving the nerves, intestinal worms, and especially irritation in the alimentary canal and the absorption into the blood of toxic germs.

But similar injuries and lesions are found in subjects who do not have epilepsy, and all irritations, both central, peripheral or reflex, do not always produce this disease. The formation of an epileptic constitution and the existance of this disease in a subject, undoubtedly depends primarily upon an instability of the nerve elements of the corticle cerebri, and secondarily an anæmic nerve element reproduction, throughout the nervous system, including cellular elements in both ganglia and brain substance. The explosion of nervous force producing a seizure, is probably due to an exagerated excitability of the medulla oblongata. Our patient has, we will say, an epileptic constitution. The cellular elements being in a condition of irritability, are ready to be touched off by some exciting cause, like powder by a flame or a torpedo by a spark.

WHAT NOW SHALL BE OUR COURSE OF TREATMENT.

It is not necessary to state to medical men, that in all diseases there may exist complications which will render any treatment unavailing. But it is one of the faults of our profession, that often we conclude that a certain method or a particular treatment is of no avail because it fails immediately to cure. Investigations made by Kellogg of Battle Creek, have proven, that after an epileptic seizure the toxicity of the Urine is double the normal quantity. Augustine has recently made investigations on the gastric juice of epileptics, and finds, that when taken just before or after an attack, it is ladened with toxins sufficiently powerful to kill rabbits when injected into the abdomen, while the same quantity of normal gastric juice has no effect upon them. Hastyeating produces gastro intestinal disorders. Cheese and sausage should be avoided because laden with germs. For the same reason, oysters and all shell fish should be prohibited. Wines and beer carry yeast germs. Meats of all kinds are stimulating and assist materially in producing an over-production of normal tissue poisons. Tea, coffee and tobacco are stimulating and in due time will weaken the action of the heart. Easily assimulated food should be selected. A strict dietary regimen of milk and well cooked grains, a moderate quantity of baked or well steamed potatoes, and other vegetables cooked in milk with occasionally soft boiled or poached eggs, is as near an aseptic dietary as can be conveniently secured. Raw peeled fruits and most cooked fruits are not only harmless but beneficial. Pure water in large quantities is a toxine modifier and

†Abstract of a paper read before the Tri-State Medical Society, April 6, 1897 by Dr. J. W. Fowler.

especially aids the kidneys in carrying away poisons from the blood. We know that nutritious food, converted into good blood, is not a good culture ground for the microbes of any disease. Weak, nervous epileptics, must be fed and furnished with strength. The majority have a starved nervous system and a constitution with little or no power of resistence. An eliminative treatment by the elimentary canal, kidneys and skin, should be an essential part of the treatment. The general practitioner knows that a large majority of the diseases treated by him, are diseases which have their origin from or are directly due to derangements of the alimentary tract. Both male and female are subjects of constipation. We know that a train of nervous symptoms comes from Chronic Constipation. How quickly the locking up of the bowels or even a torpid condition will produce headache and feverishness. Absorption of poisons can first be detected upon the breath. It is one of natures methods of elimination. The blood is charged with intestinal poisons that have been absorbed in a few hours. If the person has an epileptic constitution and a store of irritable nervous force, with a heart in full sympathy, there will be touching off with the result of a momentary unconciousness or a nervous explosion in the form of a nightmare or to that more, severe form of epilepsy the seizure. I consider nothing of more importance to the system of treatment which I have adapted, than an antiseptic laxative. By using the Woodbridge tablet No. two containing Podohyilin, calomel, menthol, thymol, encalyptol and guaiacol-carbonate, we have a harmless and mild laxative combined with a happy combination of unirritating antiseptics. By giving an antiseptic laxative in powder form, it is not so readily absorbed as a liquid antiseptic and it thus continues to make aseptic the full length of the alimentary canal. This antiseptic intestinal treatment checks the activity of the toxic germs and prevents the formation of certain media suited to germ growth. It modifies the conditions which make germ culture possible. It prevents the development of toxins, the absorption of which into the system, may be a spark sufficiently great to be the exciting cause of an epileptic attack.

With my general plans of treatment, I endeavor to maintain a moderate and even circulation. I have generally used digitalis three or more times a day in moderate doses, combined with the bromide mixture. In some cases digatalis is not indicated, especially where there is constant hyperæmia of the brain or an irregular pulse. In irregular heart beat I find nothing equal to the fld. ext. of cactus grandiflorus in ten to twenty drop doses three or four times a day. For quieting the irritability of the nerves in all idopathic cases where we know there is a nervous surcharging of the cortical centres no single drug has ever been found by experimentors or scholars of recent research equal to one of the bromides. True, we have good medicines, like belladonna, ergot, nitro-glycerine, hyoscyamus, gelsemium, antifebrin, amonium chloride and some others which are beneficial when combined with other medicine, but nothing as yet has been found to take the place of the bromides. The following is about the quantity of the combined bromides which I usually give:

R Potass. Brom.
Sod. Brom.
Ammon. Brom.
Potass. Iod.
Potass. Bicarb. .....aa ʒij
Tr. Digitalis.....ʒij-ʒiv
Liq. Po.ass. Ars.....ʒij
Infus. Columbae.....q.s. ad. ℥xij

S. Half a tablespoonful after dinner, supper and at bedtime.

We know that in many diseases drugs in combinations produce superior results, and I am positive that in this disease the combined bromides greatly enhance the power of allaying or aborting the storm. In each dose in the above prescription the total amount of the bromides is small. In all epileptics, having nocturnal attacks are requested to set an alarm to awaken them at 3 o'clock or thereabouts in order that their bladder can be freed from pressure and a dose of medicine can be taken. Where chronic poisoning by the bromides is produced and in some cases where they cannot be tolerated at all or where in very exceptional cases they greatly aggravate the number of attacks, other medicines must be substituted. The hypophosphites with iron especially the hydrocyanate of iron (Tilden) are of very great benefit where there is weak digestion and a condition of mental sluggishness. During the last three years I

have prescribed hydrocyanate of iron (Tilden) in tablet form to all epileptics treated by me, and I find it not only a tonic in the general sense of the word, but a neurotic tonic.

All cases must not be treated in a routine way. If a child is a anæmic it not only needs the small dose of arsenic which I usually add to my prescription to allay any eruptions produced by the bromides, but it needs codliver oil with malt or good graham bread soaked in cream. Some cases need a larger dose of digitalis than do others. Sometimes I give the digitalis separately and require the patient to take sufficient to keep the pulse below 80 or 85. If there is a hyperæmic condition of the brain digitalis would not be indicated. The combination of the bromides and the iodide as given above, are increased very gradually as the time lengthens between the attacks. In severe cases the quantity of the bromides in each dose is rapidly increased until the paroxysms are controlled. Then a gradual increase thereafter until a paroxysms occurs, then they are ordered a minimum dose to be gradually increased until another attack again occurs. In one case of a young lady 26 years old who had terriffic seizures every 10 minutes for 3½ days, I gave within 6 hours 160 grains of the combined bromide and ½ drachm of tincture of digitalis. This was kept up for 24 hours until the pulse became normal and a restful sleep came on. This case never had but one attack since, and that was over 3 years ago. She was a very thin anæmic person. I treated her diatetically by forced feeding the same as I do consumptives. A diet list was given her and a small tempting lunch was taken every three hours. This was continued until she gained 15 lbs. when she was allowed to take a larger meal four times a day. Where brominism is produced we can give gelsemium and cannibas indica combined. The former allays the irritation in the spinal cord and cannibas indica quiets the excitement in the cerebrum. Quinine and the salicylates should never be given as they have a marked tendency to increase the number of spasms. Certain surgical operations are of benefit when indicated. Castration and the removal of the ovaries are in some cases curative. Clitoridectomy and especially circumcision and trephining when indicated are beneficial. But further than showing that I appreciate and am in favor of surgical operations in certain cases of this disease is not the object of this statement. In addition to the medicinal and dietetic treatment I insist on the patient doing regular hard work or fatiguing himself by severe exercise in the gymnasium or by walking. It is essential to a cure in most cases. A cool sponge bath is ordered each night. The patient sleeps better and the nerves become stronger by it. In all recent cases, and a very large proportion of cases of long standing, this treatment as outlined above with its essentials and its minor factors, carefully and intelligently carried out, stops the extension of a so-called incurable degenerative disease.

Ozone as a Therapeutic Agent.

Labbe and Oudin report excellent results of the use of ozone in the treatment of whooping cough and tuberculosis. In the former case two, three, or four inhalations are given a day, each lasting from ten to fifteen minutes. Owing to the great irritability of the throat in these cases the authors commence by using the ozone produced by the silent discharge from an induction coil giving an inch spark, and by holding the child some distance away from the tube. Later on the patient is brought nearer to the tube, the capacity of which is increased, the power of the coil being at the same time doubled. The effects are rapid diminution in the paroxysms, improvement in the general condition, gain a weight, and increase in oxyhæmoglobin. In tuberculosis the ozonised air is inhaled from the inner of two tubes, between which the silent discharge from a Ruhmkoff coil, giving a 1 inch spark, is passing. The proportion of ozone thus inspired never exceeds the therapeutic dose of 12 parts in one hundred million of air. Two or three sittings each lasting ten to fifteen minutes, are recommended per diem. In six weeks there is marked increase in hæmoglobin and in the number of red corpuscles, diminution of that of white corpuscles, and especially noticeable gain in weight and respiratory capacity. The number of cases was 37, 7 being in the first stage, 22 in the second, and 8 in the third of

the disease. The increase in oxyhæmoglobin varied from 1 to 5 per cent., that of respiratory capacity from 18 to 100 c.cm., averaging 50 c.cm.; the latter was much more marked in the earlier than in the late stages. The increase in weight ranged between 1 lb. to 20 lbs., averaging 6 lbs. In addition to this the cough became infrequent, the expectoration and mucus less abundant, while the dyspnœa and sweats disappeared, and the physical signs cleared up. Caillé confirms Labbé and Oudin's results as regards whooping cough, and finds ozone very valuable in bad cases of chlorosis, but has seen no benefit from it in 3 cases of apical phthisis. He, however, suggests that its disinfect properties will render it of much service in the treatment of diphtheria, scarlet fever, and other infectious diseases.

Medical Society of Missouri Valley.

We are pleased to announce that the spring meeting of the "Medical Society of the Missouri Valley," held in Lincoln, Neb., March 18th, 1897, was one of the most interesting and largely attended within the history of this progressive society. Our attention was particularly drawn to a paper entitled "The Etiology and Prevention of Puerperal Fever," by Dr. W. J. Findley, of Atlantic, Iowa, in which the Doctor endeavored to paint out the present status of a septic obstetrical practice, and entered a plea for less frequent interruption of natures processes in the conduct of labor. We have the pleasure of giving such parts of this paper as we could glean from the reading, in which the writer said that the etiology and prevention of child bed fever is probably the most essential element in obstetrical knowledge and practice, meaning the limitation of wounds and the prevention of wound infection, the cause of which being as thoroughly understood to-day as that of infected wounds in general surgery. Also that these cases are far more numerous than the average practitioner is aware of, since nearly all of the pelvic disorders are directly attributable to this cause.

With slight modification the theory of Summelweis, who was persecuted until the day of his death because his progressiveness which was stigmatized as insanity, stands to-day as the foundation upon which all our knowledge upon the subject is based, a declaration that child bed fever is due to septic infection of some lesion of the genital tract.

Attention was also called to the fact that the same proposition should also cover the urinary tract as well, and that pyelitic following labor was not a rare occurrence as the result of extension from neighboring infected areas, or occlusion of the ureters by pressure from the gravid uterus.

It was then shown that every measure for the prevention of wound infection in general was equally good as a prophylactic measure in obstetrics, for we have here an extensive fresh wound contained in a closed sac abundantly supplied with lymphatics and blood vessels which serve freely as a disseminating means for infection. The endometrium in its superficial layers is always removed, leaving only the exceedingly thin cavernous layer and basement glandular tissue, the meshes of which are filled with blood clots, and the entire surface covered with a film of blood coagulum, an ideal culture medium for bacteria, a condition which needs but the slightest error in asepsies to change it to the pathological.

The various methods of infection were pointed out, the writer building upon the assumption that the disease was strictly exotic in character and that contact was responsible in nearly every instance. That auto-infection in the sense in which the term has come to be used, in contradistinction to contact infection, is practically a misnomer and simply means an invasion of the pelvic organs by pathogenic micro-organisms eminating from without remotely, but immediately from within, conveyed by vaginal secretions, the rectum, bladder, labial abscess, rectal fistula, gonorrhœa, sutures, etc., or it may be an acute exacerbation of pre-existing infection within the pelvic, or even metasaltic in its immediate origin.

It was further stated that the cellular elements of the body have the power of producing fermentative changes, independent of those of bacteria, which always come from without, products of nitrograde metamoryhosic known as leucomoirs, many of which, in point of toxtc qualities, are just as viruient as ptomains and have the power of produc-

ing diseases which are truly those of spontaneous or auto infection. That the dictum of Weigert, "no suppuration without bacteria," although meeting with some challenges, has been generally accepted, therefore, since these basic substances are entirely destitute of pyogenic properties it was assumed that they could not, under any circumstances, be the author of peurperal sepsis.

Air infection was practically excluded from standing in causal relation to the disease.

The author said that the latest invoice made by Ernest shows about 40 varieties of these miscreants engaged in the nefarious business of marking women for casteration, of which the streplococcus is chief, and the gonococcus a formidable rival, these micro-organisms being the same as cause sepsis elsewhere in all fresh wounds and sapræmia may also cause the clasical symptoms of the disease.

Aseptic obstetrical practice has rendered puerperal fever a preventable disease, providing there is no pre-existing localized collection of pus or bacteria in the pelvic, in which event the puerpearal disorder is but an extension of the local ized septis process, the existence of which is not always easy to determine before labor.

The author here cited a recent case of puerperal peritonitic occurring in his practice in which no internal examination had been made either before or after labor. The placenta and membranes were expelled entire without material aid, and there was not at any time evidence of endometritis. The infection was attributed to extension from a diseased tube and ovary from which the patient had suffered for years.

As for prevention the writer holds that every obstetrition has the duty devolved upon him of anticipating and preventing preventing puerperal sepsis in a strictly surgical manner, in so far as limiting the number and extent of wounds and the protection of those that necessarily occur is concerned. A certain diagnosis of presentation and position by abdominal exploration and a limited number of vaginal examinations enables the operator to conduct the labor with precision and a minor degree of aimless effort which can only prove a menace to the patient.

The rupturing of the bag of waters was favored only when its mission has been perfectly performed, and it is serving as an unnecessary retarding element to the progress of labor.

Even in thus hastening labor there is more or less danger of trauma to mother resulting from a possible imperfect dilation of the soft parts and adjustment of the bony elements to the presenting part, and to the child a danger of prolapse of the cord or some extremely following the gush of amniotic floid.

A few weeks ago the author met with an accident of this kind at a time when he thought it perfectly safe to rupture the bag. The cord prolapsed immediate ly upon liberating the water, and unusually strong resistance from uterine contraction made it impossible to return the cord or turn the child. High forceps delivery was accomplished bnt not in time to save the life of the child. The woman had been in labor four days, and there was an antero-posterior contraction of the pelvis which prevented, fixation of the head. It was further said that "in natural labor the protection of the uterine cavity from the invasion of vaginal micro-organisms or infection from without is complete, first by the mucous plug, which, upon beginning dilation of tho cervix is supplanted by the bag of waters, this in turn by the presenting part.

Were it not that the wisdom of man begins where the wisdom of the God of nature ends, we would let this process of nature severely alone and not be tempted in our sympathy for the suffering woman and anxiety to please the friends by a hasty termination of labor, to practice meddlesome midwifiing and do that which we should not do.

The Doctor here called attention to and enlarged upon the various injurious methods of hastening labor, such as digital dilation of the cervix, unnecessary use of forceps, exhibition of large doses of ergot, etc., and recommended the Crude or Dublin method of expelling the placenta to the entire exclusion of undue traction upon the cord or internal manipulation, holding that nature most perfectly and safely performed this function.

Vaginal irrigation just before labor was not favored except in case of doubtful cleanliness and freedom from patho-

genic bacteria, for the removal of natures lubricant is certainly injurious to the progress of labor as well as removing a secretion which is normally antiseptic. The irrigation also renders more vulnerable every part of the external genitalia.

Post partum douching was also not favored, except in case of doubtful asepsis in the management of labor, for the rea son that the mech>nism of labor is so wisely ordered by nature that the entire parturient act serves to flush the tract with antiseptic fluids and guard the woman against infection.

The Doctor concluded by saying that physicians would often times recount their experience and conclude that without such precaution no bad results have followed. This may be true for nature is very kind to the woman, and as a rule gives to her a resisting power almost amounting to immunity and the propagators of the human race may be thankful that not every one to whom infectious material is conveyed yields to its influence.

Trachelorrhaphy.

Dr. W. O. Henry, of Omaha, Professor of Gynecology in the John A. Creighton Medical College, read an interesting and instructive paper upon Trachelorrhaphy, before the Missouri Valley Medical Society, at its meeting in Lincoln, Neb., on the 18th of March.

The author took the ground that many of the minor lacerations were repaired by nature, and, therefore, he was opposed to the immediate repair of these lacerations, except in those cases where there occurred post-partum hemorrhage as a result of lacerations so deep as to sever the circular artery, in which case the hemorrhage could best be controlled by doing an immediate operation.

The indications for secondary operation he gave as follows:

1st. All deep lacerations which allow the lips to roll widely out.

2d. All lacerations deep enough to give rise to hemorrhages.

3d. All lacerations accompanied by marked subinvolution, and especially when of the cervix.

4th. All lacerations which cause extreme nervousness, as demonstrated by discovering a sensitive point in the angle of laceration by pressure with the point of a probe.

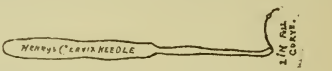
5th. When abortions are frequent and traceable to no other cause.

6th. When there are distressing symptoms not traceable to any other cause capable of removal by simpler means.

The doctor called special attention to the great importance of cutting out the cicitricial tissue, not only along the borders of the lips, but especially in the angle. The great difficulty of doing this thoroughly in some cases had led him to devise a special cervix knife, which is here shown, and with which he claims the

paring can be done not only more quickly but more thoroughly than with any other instruments upon the market.

The doctor also exhibited a cervix needle, his own modification of one of



Wilson's cervix needles, which he passes through both lips and then hooks into it a silver wire suture, which is properly placed by withdrawing the needle. He uses the wire in preference to any other suture, and prefers to twist it rather than to use shot.

Veratrum Viride in Puerperal Convulsions.

The Boston Medical and Surgical Journal has a valuable article by Dr. Wm. Henry Thayer, in which he says:

In the treatment of puerperal convulsions—while recognizing uremia as the constant predisposing cause, which may become the exciting cause—we must, of course, consider that the exciting cause may be reflex, requiring evacuation of the uterus, the stomach or the bowels, for their arrest. All practicable measures to that end having been taken, as by active cathartics or emetics, are indicated, we at once address ourselves to the nerve centres, to control nervous excitability until the exciting agent can be eliminated.

For this object, venesection was the

reliance until the employment of ether by inhalation largely superseded it. If venesection sometimes failed to relieve, ether never did, while the patient was kept unconscious; and if it could safely be continued until delivery or free catharsis occurred, which usually terminated the proxysms. It has been found, however, thrt *veratrum viride* in large doses will act as thoroughly as ether; and its effects can be continued, and without producing unconsciousness.

In the condition of the nervous system that exists in puerperal convulsions, there is a peculiar tolerance of veratrum viride, so that the officinal dose has no effect. But large doses quiet the nervous erethism, producing a decided effect in a short time— sometimes in fifteen minutes, but almost certainly within an hour—and keeping the nervous system under control for several hours, The administration is followed by cooling of the surface, great lowering of the pulse in rate but not in strength, and along with this complete arrest of the convulsions. The state state of the pulse is the guide in treatment. From a high rate, which rules in the disease, it is reduced to the normal standard or below it; and while it is kept below 60 there need be no fear of a recurrence of the paroxysms. When this effect has been once produced, it will continue several hours, and a single dose will do it; if not apparent within an hour or less, the medicine must be repeated in smaller doses; and it can be safely repeated at intervals until the pulse begins to fall. With the pulse for a guide, no untoward symptoms need occur from its use; the pulse may be brought down to 50, without any general depression; if carried so far as to produce vomiting, we may find great prostration produced by the nausea, which is overcome within thirty or forty minutes by opium, or any diffusable stimulant—perhaps in less time by a solution of morphia hypodermically.

Dr. Norwood, of South Carolina, who introduced the use of veratrum viride as a very efficient agent in the treatment of acute febrile and inflammatory disease, calls it "an arterial controller or vascular regulator," and says, "its primary effect is to render the pulse slow, full, distinct and stronger. * * * It allays morbid irritability in the nerves and muscles of voluntary motion. * * * We have found nothing that arrests convulsions in children, accompanied with high febrile symptoms, with anything approximating such certainty and speed. * * * Why would it not be the remedy in puerperal convulsions, when accompanied with frequent pulse, great heat and dryness of the skin, alone, or after blood letting, where venesection was indicated?"

But Dr. Norwood never tried it in puerperal convulsions. In the paper from which I have quoted, published in 1878, he says, "In puerperal convulsions there is no remedy equal to stramonium."

The employment of veratrum viride in large doses in puerperal convulsions was first reported to the King's County Medical Society (New York) by Dr. Herbert Fearn, of Brooklyn, in 1869, substantiated by cases in which he had used drachm doses of the tincture, sometimes required to be many times repeated, with favorable results.

Since 1869. when Dr. Fearn's paper was read, the treatment of puerperal convulsions with veratrum viride has been slowing gaining favor; of which we have evidence in many communications to various societies and medical journals. Bartholow, in his "Materia Medica and Therapeutics" (1888), says: "Dr. Sullivan of San Francisco, informs me that veratrum viride (half a drachm of the fluid extracts every fifteen minutes, until nausea or vomiting ensues) is invaluable in puerperal convulsons. Baker, in his 'Puerperal Diseases,' had already called attention to its utility; and Boyd confirms the previous observations. Increasing experience adds to the testimony regarding its exceptional value in relief of this formidable malady."

I believe the use of veratrum viride in puerperal convulsions originated in Brooklyn, where its value is now generally recognized. It has gained ground elsewhere, as rapidly as could be expected of the management of an affection so infrequent, and promises in time to supersede all other methods of treatment.

Habitual Constipation.

Ewald in the Edenburgh Medical Journal says that there is beyond doubt a

form of habitual constipation in which there is either a diminished irritability of the intestinal nerves or a defective development in the muscular coat of the intestine. An hereditary factor is often present. Constipation may be acquired through the habit of suppressing the desire. Unsuitable diet is frequently a cause. An abundant diet difficult to digest, deficient in water, or too easily absorbed, or of insufficient variety, may lead to constipation. Sedentary habits are also a cause, but obstinate habitual constipation may occur even in those who lead an active life. Disturbaaces in the circulation as in heart disease, mechanical pressure, and particularly pregnancy may produce it. Displacement of the bowel, such as occurs in Glenard's disease, is of doubtful influence. Adhesion of coils of intestine together, or to some organ, is an occasional cause. The symptoms are general and local. The relation of constipation to mental disturbance is well known. The theory of intestinal intoxication, although not absolutely proved, cannot be set aside. In the diagnosis mechanical obstruction must be carefully exuluded. The prognosis as regards recovery from habitual constipation is doubtful. Under treatment the author says that as few purgatives as possible should be used. The various methods of treatment are (1) dietetic, (2) physicomechanical, and (3) medicinal. (1) Such foods should be employed as are known to increase peristalsis. (2) Suitable massage is of the greatest value in many cases, but it sometimes fails, and the same may be said of electricity. The usual position taken up in defæcation is not the one best adapted for emptying the rectum. Under the head of "clysters" the author draws attention particularly to the anal part of the syringe. It should be made of vulcanised caoutchouc, and about 30 to 46 cm. long. The disadvantages of clysters is that ultimately small quantities of water do not suffice, and then large amounts must be used. The large intestine may thus become overdistended and the injections useless. Regular attempts at defæcation with slight pressure should be made. (3) The author discusses the various medicinal agents under mild and more powerful purgatives. An efficient rhubarb preparation is very useful, but it may become necessary for the patient to have constant recourse to it. The author mentions two cases in which rhubarb was taken for twenty and thirty years respectively. Calomel is especially useful in children. Castor oil is not suited for constant use. Aloes belongs to the stronger purgatives. In a few cases, with a certain diagnosis the fæcal tumor, the author obtained the best results by the use of croton oil with castor oil. He then refers to saline purgatives and mineral waters or German spas. Large injections of olive oil may very properly be recommended. Sometimes sedative and antisepasmodic remedies are required where constipation is of the spastic type.

Treatment of Pneumonia in Children.

Buxbaum in the British Medical Journal discusses the bath treatment in infantile pneumonia, both croupous and dobular. In children the great danger of pneumonia is not hyperpyrexia but heart failure; next in importance are nervous disturbances and active or passive congestion of the lungs. The condition of the right heart being all important, the pulse must be studied no less than the temperature. Buxbaum finds the best treatment of pneumonia in children is tepid hip baths with powerful douchea and rubbing not lasting more than five minutes; in speciai cases these may be combined with the local application of ice. Different authorities recommend various temperatures for the bath; Buxbaum obtains the best results with a temperature of 64° to 72° F. The temperature of the patient is by this means often reduced from 5° to 6°. and the vigorous friction helps to make the fall persistent, while at the same time it obviates the tendency to collapse. The circulation and respiration are markedly benefitted, the action of the heart and lungs being slowed and deepened; the pulse frequency often falls 30 or 40 beats a minute. The effect upon the nervous system is even more powerful; the anxious expression, the stupor, the delirium, and the convulsions disappear, and give place to natural and peaceful sleep. The vasomotor centre is especially stimulated, and the vasomotor paralysis resulting from the action of the pneumococcus disappears

in consequcnce. This action is mate rially assisted by the cold douche to the head and neck while the patient is in the bath; it is only in very bad cases that momentary immersion in cold water (50°) followed by rubbing is required. Local bandages soaked in cold water and tightly bound, especially round the loins, are, however, almost always of service, as also is swathing the extremities in warm moist bandages after the bath. A stimulant should be given both before and after bathing. The author states that his method compares favourably with packing or simple friction, and concludes by giving an account of some remarkably successful examples of its employment.

Antitoxic Serum in Diphtheria and Phthisis Pulmonalis.

Dr J. M. Allen of Kansas City read a paper with this title before the State Medical Society, April 7, '97.

He has treated fifty three cases of Diphtheria without death. Forty of these were treated with Serum alone, the others had been under treatment before he saw them. These cases were attended with the following complications; hoarseness seven cases. Five cases of Aphonia; two of Toxiemia; one of Broncho Pnuemonia, resulting from the extension of the membrane; one of Paralysis.

No operative interference was needed. In all the cases seen the first twenty-four hours, there was no complication. He administered Serum Hypodermically for three days, and decreasing doses in mild cases. In malignant cases, full doses for at least three injections, ten hours apart. This continued administration of Antitoxine Serum prevented any laryngeal trouble which often occurs ten days after the membrane is removed from the throat, because it destroys the Bacilli or lessens their vital force to a degree that they are innocuous. He had immuned seven children that had been dangerously exposed to the disease, which afforded them protection.

He had treated four cases of Phthisis Pulmonalis with Paquin Antitoxin Tuberculosis Serum, with the following results; one case recovered; one greatly benefitted and when last seen the Bacilli were attenuated, the third was in the last stage of Phthisis, but was, nevertheless, mater ially benefitted—life being prolonged; and the fourth case was refractive to the treatment and was not helped. He gave it as his opinion that the use of this Serum in connection with the accompanying prescription see below, offered great prospects for the treatment of Phthisis Pulmonalis, if begun before there is any breaking down of the tissue. If the case was not too far advanced in second stage, this treatment offers many benefits and possible cures.

He stated that he had ample opportunity in his clinic at the University Medical College of Kansas City to thoroughly test the value of Creosote. His observations were that Creosote did not materially effect the Bacilli and that the only beneficial effects was in destroying Toxines in the blood, thereby breaking up or lessening Hectic Fever with its consequences. Also its curative effect of Chronic Inflammation and Ulceration of Duodenum which is a very frequent complication of Phthisis and a factor in producing Amaciation, because of its interrupting Intestinal Digestion and Assimilation. That the potent factor in the cure of Phthisis was the Antitoxic Serum. It was his opinion that the action of this Serum was to destroy the entity upon which the Bacilll lived and developed.

He further stated that it was well established from scientific experiments with Serum injections in the blood that it had Globucidal, Germicidal or Bactariological power. He asserted that the environments bactaria had as much to do with life and development, as with the life and development of the human family.

He further claimed that immunity was nothing more than the destruction of the entity in the human system upon which the germ lived and developed, and after the destruction of this entity by the germ that the person was immuned from the disease.

He instanced the effects of vaccination as a protection from Smallpox, claiming that this illustrated the effects of all that class of contagious diseases which the human family has but once.

He also pointed to, as further evidence, the germ fermentations Venous, Acetious and Acoholic. These germs after consuming all the elements that would support their life, in these fluids died, and the

fluids themselves were rendered Germicidal.

The same theory of facts explains the action of contagious diseases in the human famtly.

℞ Cresote.....Gttsxlviii
Tinct Cinnamon.....ʒii
Glycerine.....ʒiv

Sig. Teaspoonful gradually increased to five teaspoonful three times daily before eating.

℞ Oil Eucalyphtus.....ʒi
Oil Cassia.....ʒi
Creosote.....ʒi
Oil Tar.....ʒi
Siq. Vaseline.....ʒiv

Sig. Inhale frequently in nebulizer.

Supplied Blood "in Uxtremis" A Killu of Septicæmia, and of Syphiliticims.‡

I.

Miss B., age 16, of Lincoln, Neb., was admitted to the hospital in Kansas City, Mo., June 9th, 1891. Laparotomy for ovarian cyst was performed on June 12th. She was anæmic in the extreme when admitted, and generally in bad condition for an operation, but the case demanded immediate relief and the operation was deemed particularly successful; but the low vitality and extreme nervous irritability of the patient gave no promise of a favorable outcome.

Shortly after the operation the stomach became so irritable that all nourishment and even cold water were rejected. The temperature and other grave symptoms indicated sepsis. On June 18th, the date of my first visit to the hospital, the patient's life was despired of, and the last rites of the church were being administered at the time of my arrival. Dr. G., the surgeon in charge, kindly gave me a history of the case. Rectal feeding had already been tried with unsatisfactory results, beef tea and milk having been used. At my earnest request I was permitted to test the value of the blood treat ment, the doctor saying at the time that the patient would not live 48 hours. Bovinine, one ounce, sterilized water, one ounce, pancreatine, five grains, raised to a temperature of 100 degrees F. were employed and forced high up into the rectum. This was retained, and the same dose was repeated after an interval of two hours. After eight hours the distress and painful retching subsided, and if food was not alluded to the stomach remained tranquil. For twelve days the only nourishment administered was bovinine every three hours day and night, and by this process of nutrition alone, the vitality of the patient was restored, so that at the end of that period she sat up in bed and, for the first time since the operation, expressed a wish for food. On July 3d, this moribund girl was pronounced con valescent.

‡Dr. W. H. Parsons, Omaha. Neb.

II.

In St. Louis, a lady had picked her thumb with some poisonous product, and blood poisoning in its most virulent form supervened, and in spite of the best efferts of several leading surgeons, the case came to a point where amputation at the shoulder seemed the only alternative. The hand and arm were swollen to their fullest capacity, and honey-combed with scores of sloughing ulcers. Upon my advice the hand and arm were dressed six times each day, after having been thoroughly cleansed, with pure bovinine; the ulcers being packed with soft lint saturated with the same, and the entire arm and hand dressed with it. In thirty hours a change was manifest, and in sixty hours healthy granulations began to appear, diseased tissue to slough out, and in twelve days her hand and arm were as good as new.

III.

A man in St. Joseph, Mo., wounded himself in the hand while dressing dead hogs at the yards. Blood poisoning set in in earnest. In six days all dressingg, etc., had failed, and amputation was suggested, I was in the attending surgeon's office when he related the case to me. I suggested wrapping the arm and hand in bovine blood, changing every four hours. In twelve eaurs the change was so marked that the doctor sent for me to see the case. In four days he was well. The doctor thanked me, as did the man, who was about to loose his arm and probably his life.

IV.

"A man in St. Joseph's Hospital, Oneota, had his arm smashed in a rail -

road accident; the fractures were compound and badly comminuted, and in a few days an erysipelatous condition set up, which threatened his life. I was in the hospital, and the attending surgeon, an old friend of mine, Dr. E. W. Lee, chief surgeon of the B. & M. Railroad, called me to view the case. It was truly desperate. I advised taking aff all dressings, put the arm on a pillow, cleanse it thoroughly with hot bichloride, and wrap the entire arm in pure bovinine. After some hesitation it was done, and in four days the condition had so far changed as to allow the arm to be put back into the dressings. Another life saved, and another victory for Blood."

V.

Soft chancroid involving the glans and prepuce. The soft ulcer had been doing its work for four weeks; appeared almost malignant; various dressings had failed, such as iodoform, etc., etc, This ulcer was packed in pure bovine and soft lint, changed every two hours the first three days, then every four hours. In thirty-six hours the diseased tissue sloughed out, healthy granulations set up, and in ten days he was well. This, in brief, is my experience along new lines (that is, new to me). W. H. Parsons, M. D.

814 N. 23d St., Omaha, Neb., Nov. 22, 1895.

Venereal Buboes.

Dr. Perry, in the American Journal of the Medical Sciences, says he has employed the treatment described by Dr. Hayden in seven cases with extremely satisfactory results. This method consists in making a small puncture of the skin at the most fluctuating point of the bubo; thorough evacuation of the pus; irrigation of the cavity with peroxide of hydrogen followed by bichloride solution 1:1000; removal of all fluid by compression, and distention of the cavity with warm vaseline holding in suspension ten per cent. iodoform; and application of a cold bichloride dressing to favor congealment. Of Dr. Perry's patients five were cured by one injection, the average time of treatment being thirteen and one-half days. On the ground of his experience he concludes:

1. That buboes are probably caused by the absorption of chemical poisons, the result of the action of the micro-organisms in the chancroid, and not to the entrance of the micro-organisms themselves into the lymphatics.

2. That the benzoate of mercury yields such satisfactory results that it should be employed in the treatment of non-suppurating buboes, and excision reserved for those cases in which benzoate has failed.

3. The injection of iodoform ointment should be used in the treatment of all freely suppurating buboes, since statistics show that it yields much more satisfactory results than the other methods of treatment applicable to this variety.

4. Incision and curettement should be used in a few cases in which the skin has been destroyed, and the ulcer presents an unhealthy granulating surface.

5 Excision should be reserved for cases that have not yielded to other treatment, and for those in which there are several foci of suppuration.

Hysterical Hæmoptysis.

Strümpell in the British Medical Journal records a case of hysterical hæmoptysis after fracture of two ribs in a man. Three days after the accident the patient spat up some blood, and for the next three months did not leave his bed. He complained of frequent pain in the injured side, with cough and bloody expectoration. His expression was that of a melancholy hypochondriac. The cough was slight but almost continual, and had an artificial sound as if produced by an effort for the occasion. The surface of the soft palate was stippled with tiny hæmorrhagic spots; the larynx was normal. About 15 to 30 c.cm. of blood stained expectoration accumulated daily in the spittoon; it consisted chiefly of mucus containing a few white and red blood corpuscles, which gave it a pale reddish colour, much paler than that of "rusty" sputum; there was only a trace of pus, and no tubercle bacillus. The lungs and other organs were normal. There was much complaint of headache and drowiness, and other neurasthenic trouble. Treatment directed especirlly to the psychical condition was followed by improvement. Strümpell considers that such cases are

not sufficiently recognised. The expectoration is almost always from the mouth or pharynx, or neighbouring parts, and may be distinguished from true hæmoptysis by the far smaller amount of blood in it, the absence of pus elements, and the large amount of squamous epithelium leptothrix and food remains present. The blood expectorated is to be attributed to the mechanical injury to the mucous membrane from the cantinual cough. Such hysterical hæmoptysis occurs also apart from trauma in persons of hysterical or hypochondriacal temperament.

The Curette in Labor.

Nitot exhibited recently at a French society a "giant curette," designed specially for the uterus in the puerperium, where the small sharp instruments useful for the non-parous uterus are inconvenient and dangerous. In the discussion Budin declared that he no longer uses the curette after labour. He has had excellent results following the simple practice of clearing off adherent fragments with the finger and then mopping the uterine walls. Chargenter, on the other hand, is a strong supporter of the early use of the curette under the same circumstances. Suitable cases are, in his opinion, kept waiting too long. The instrument must be employed before the infective process has become generalised; indeed, when the uterine tissue has undergone changes from that process, the curette actually increases the danger. He has never had any bad results, even indirectly, after the use of the curette in the puerperium.

The Bacteriology of the Middle Ear.

The bacteriology of the middle ear has been worked at by a number of experimenters within recent years, but hitherto the results arrived at by them have not been quite in harmony. Kanthack found, in seven cases of exudation into the tympanum, staphylococcus albus six times and the diplococcus of Friedländer once, these being more or less associated with saprophytic organisms and undertermined bacilli. Gradenido's observation coincided with Ranthack's, but Scheibe, in making cultivations from the exudations of median otitis, found no organisms at all, and his conclusions have been confirmed by subsequent experiments since carried out by himself under the most rigorous antiseptic precautions. Lannois has endeavored to reconcile these apparent contradictions. His plan was carefully to sterilize the external meatus and extract the catarrhal exudation from the tympanum after performing paracentesis with a sterilised knife.

Lannois made twelve cultures with the liquid obtained in this way from six patients suffering from catarrhal otitis media. Five of the cultures were fertile and seven sterile. The explanation of this diversity of result is aided by the author's previous investigations regarding the normal bacteriology of the middle ear, which demonstrate that in health the tympanic cavity is sterile.

Medical Application of the Roentgen Rays.

Rendu reports the case of a man, aged 20, who had an illness beginning with characteristic typhoid symptoms and followed by typical infective pneumonia. Pure cultures of staphylococcus were found in the sputum. After an incomplete defervescence the fever returned, and all the signs of suppuration of the pleura or lung developed. Examination of the sputum, which could only be obtained twice, showed a few tubercle bacilli, but the respective parts played by the staphylococcus and the bacillus could not be determined. Whatever the exact nature of the illness, the patient at the end of six weeks' illness, with hectic temperature appeared to be dying. He was then exposed to the Roentgen rays. for fifty five minutes every day. After the fourth exposure the temperature fell by crisis and never rose again. This was accompanied by diuresis and diaphoresis, and the patient was soon quite well. This may have been a coincidence, but was probably not so, since no other change in the treatment or conditions was made. After ten applications erythema and ulceration of the skin appeared, and it is possible that equally marked trophic changes take place in the deeper tissues also.

Effects of Cigarette Smoking.

Dr. S. Severson, writing in "Pediatrics" with reference to the effects of cigarette smoke upon children, says that upon the nervous system the poison, nicotine, has a decided effect. It paralyses the nerves controlling the muscles of the iris, and consequently the pupil becomes widely dilated. The symptoms produced are obscurity of vision, specks before the eyes, and sometimes deep seated pain. Upon the exhausted brain it has a soothing effect ; upon the fully nourished brain it acts as an irritant. In extreme cases the most pronounced effect is that upon the cord, both the sensory and the motor nerves of which may be affected, as shown in external insensibility, convulsions and paralysis. Death results from respiratory failure due to spasm of the chest muscles, or from paralysis of the heart.

Through the sympathetic nervous system the secretions are disturbed, also the regulation of involuntary muscular contraction, as shown by the muscular spasm of the stomach and by the vomiting produced on the first attempt at smoking. The nerves controlling the secretions of the glands are affected in such a way as to cause over-secretion, and, if tobacco is excessively used secretions may become uncontrollable. In the majority of smokers the salivary glands are excited to over-secretion, and if the saliva is swallowed it conveys to the stomach the poison, nicotine, and the bitter extract. These irritate the mucous membrane, and cause inflammation. Irregular secretion of the gastric juice follows, and often a deficient amount is produced, causing dyspepsia and loss of appetite.

The muscular contraction of the stomach and intestines is increased. In moderate smokers this acts as an aperient; but if smoking is carried to an excess the muscles may become paralyzed and constipation results. These disturbances being functional, the tissues quickly regain their normal condition when tobacco is not used.

Although the salivary secretion is increased, the mucous membrane of the tongue and throat becomes dry and irritable, due to the ammonia inhaled. The gums may become firm and contracted, or vascular and sore with a tendency to bleed. In the smoker's sore throat the mucous membrane is inflamed, the onsils enlarged and soft, causing pain on swallowing.

Free carbon is deposited upon the teeth, discoloring them ; but acting, it is thought, as an an antiseptic and preservative. Inhaled into the lungs it acts as a mechanical irritant to the mucous membrane of the bronehial tubes, and if bronchitis be present it maintains an irritable state of the membrane and keeps up the cough. It cannot be said to cause directly any organic disease of the lungs; but the absorption by the blood of the various poisons inhaled causes a general enfeeblement of the system—the carbonic acid and oxide causing incomplete oxidation of the blood, the nicotine producing various nervous phenomena, and the ammonia compounds having a solvent power upon the blood corpuscles. Thus, by lessening the bodily vigour the person is unable to withstand disease, and if he inherits weak lungs, may easily become a prey to the tubercular bacilli.

In conclusion, Dr. Severson says that upon the young tobacco has a decidedly injurious effect. If tobacco produces functional disturbances of the principal organs of the body, the heart, the stomach lungs, etc., and the system is constantly striving to eliminate the poisons, then surely so much energy is wasted through all the years when so much is needed for growth and repair. With the blood in completely oxidised, heart acting feebly, stomach refusing to digest properly, lungs, skin, and kidneys overworked, the whole organism is in a state of disorder. What is the result?

Phenocoll Hydrochloride in an Epidemic of Influenza.

Dr. G. Villani, (Rossegna Medica). In an epidemic of influenza in the Dosolo and Corregioverde districts of Italy, the author employ phenocoll hydrochloride exclusively for the cure of some 400 patients. Already acquainted with the value of quinine, phenacetin, salicylate of soda and antipyrine Dr. Villani was led to employed phenocoll owing to the reputation it had already obtained in Italy for the treatment of malaria, with the result that he continued to prescribe phenocoll hydrochloride for influenza in preference to the other antipyretics.

Of the various salts of phenocoll, the hydrochloride was found most suitable for administration, being a fine white crystalline powder, inodorous and with a slight bitter saline taste; readily soluble in water, the solutions, are neutral in reaction, although bitterish in taste, are readily taken, especially if a little syrup is added, even by children and those adverse to medicines. For adults powders were generally prescribed, and for children, solutions in syrup. The dose usually administered was 30 to 55 grains daily in 8 grain portions for each adult and a solution of 15 grains to be taken in small quantities during the 24 hours for each child.

The effect of the medication generally made itself felt after the first or second dose; the fever abated, and there was almost an instantaneous disappearance of cephalgia and a gradual cessation of nervous symptoms. It was rarely that the drug acted more slowly, or that four or five days passed before a normal stage was reached; usually, the most recent cases were most easily dealt with. No grave complications were met with, and altogether, phenocoll hydrochloride appears the best therapeutical agent for treatment of influenza.

Dr; Villani came to the following conclusions:

1. Phenocoll hydrochloride exerts a powerful antifebrile action for a period varying between 3 and 4 to 6 hours.

2. It is a useful antiseptic.

3. It is a useful antipyretic, and analgesic against neuralgic symptoms.

4. It is easy of administration not only to adults but also to children, the slight brackish taste of the solution being easily covered by a corrective.

5. The symstem does not become accustomed to the drug and requires larger doses.

6. Its administration does not cause nausea, vomiting, collapse or any other disturbance.

7. The reduction of temperature is regular and continuous, being accompanied by a slight perspiration, but rarely by copious sweating.

Dr. Ottinger recommends icthyol for the bites of insects, in the form of a paste or ointment.

Widal's Sero-Diagnosis of Typhoid Fever.

This test, which represents the latest application of our recently acquired knowledge of serum therapeutics to the diagnosis of disease, bids fair to become one of the most valuable aids to diagnosis put forward in recent times. Typhoid fever is so insidious in its onset, and frequently (in its atypical forms) so difficult to identify, and its identification, more over, is so frequently a matter of moment that anything which promises to help us towards more facility and certainty in its diagnosis is peculiarly welcome. The test depends for its efficacy upon the fact that the blood serum of persons suffering from enteric fever)in the advanced stages at any rate) invariably—as it is alleged—produces on the living microbes a characteristic change—a grouping in clumps. The results obtained by Drs. Delèpine and Sidebottom, "confirm entirely those announced by Widal." Out of twenty-five cases of undoubted typhoid fever which were examined by these observers, there was not one in which the blood did not give rise to agglomeration of the bacilli sooner or later. The single drawback at present apparent in the test is the lack of definiteness when applied before about the ninth day of fever. It should be noted that solutions of dried blood are now successfully used in place of the serum first recommended.

Bicarbonate of Sodium as a Dressing for Suppurating Wounds.

N. V. Georgevsky (The British Medical Journal) has observed that the application of compresses saturated with a solution of chemically pure bicarbonate of sodium and covered with some impermeable material, has the effect of drying up purulent secretion and cutting short phlegmonous inflammations. These results are obtained by this means much more rapidly than by any other known antiseptic—carbolic acid, iodoform, etc. Georgevsky first noticed this action of bicarbonate of sodium by accident in treating a case of whitlow. A deep incision was made on the dorsal aspect of the diseased finger, and gave issue to a large quantity of laudable pus. The

wound was washed out and dressed with an iodoform ointment. The suppurative process advanced, and a counter-incision was made on the palmar surface. The patient, however, drew back his hand at the critical moment, so that only the epidermis, which was much thickened at the spot, was penetrated. Georgevsky thereupon determined to wait a little, and in the meantime to soften the integument by applying compresses of tarlatan soaked in a 2 per cent. solution of bicarbonate of sodium. On examining the hand next day he was surprised to find that the situation was completely changed. There was no longer either pain or redness or swelling of the parts; there was no trace of pus on the dressing or in the wound, and not a drop could be sequeezed out by pressure on the finger and on the palm. A complete cure very speedily took place. Georgevsky has since used the same treatment in a number of cases of whitlow and other phlegmonous lesions both circumscribed and diffused. In every case he first makes an incision into the suppurative focus; after squeezing out the pus, he applies directly to the gaping wound, as well as to the inflamed neighbouring parts, a compress soaked in a solution of bicarbonate of sodium of the strength indicated above. By this procedure he invariably succeeded in stopping both the pain and the suppuration and in effecting a rapid cure without the necessity of using drainage. As a confirmation of the superior efficacy of the bicarbonate of sodium as compared with the antiseptics in common use in such cases, Georgevsky mentions that whenever he substituted an iodoform dressing for it, suppuration began anew, ceasing again as the bicarbonate of sodium was reapplied.

Operative Treatment of Hip-Joint Disease with Extensive Pelvic Caries.

Woleff in the London Lancet reports a case in which Bardenheuer removed the whole of the lower limb and the corresponding half of the pelvis from a woman aged 46, who had suffered since infancy from tuberculous disease of the hip. Extensive caries of the pelvic bones was indicated by much distortion of the acetabulum, and by the presence of sinuses above Poupart's ligament, and of a "perforation abscess" in the iliac fossa. The extent and duration of the disease, the participation of the pelvic bones in the morbid process, the age of the patient, and excessive albuminuria, all contra-indicated resection of the hip. As the only hope of recovery lay in prompt removal of the source of suppuration it was decided to exarticulate the lower limb at the hip joint, and at the same time to remove the diseased portion of the pelvis. This formidable operation was justified by the result, as the patient made a good recovery, and the urine became free from albumen on the fifth day. The first step in the operation consisted in ligature of the external and internal iliac vessels. This preliminary procedure, which in most cases of pelvic suppuration is attended with some difficulty, is regarded as an essential one, as it is very necessary in the subjects of chronic and exhaustive disease to prevent any free bleeding. This step was followed by removal of the lower limb at the hip. The horizontal ramus of the pubes was then sawn through, and afterwards the ascending ramus of the ischium. The ilio-psoas and the abdominal muscles having been separated from the ilium, the large portion of the os innominatam, now attached only at the sacro-iliac joint, was forcibly wrenched away. The only part of the affected half of the pelvis then left was a small portion as the ascending ramus of the ischium, which was not diseased. In closing the large wound the free end of the psoas muscle was fixed by sutures to the ends of the divided abductors with the object of preventing hernia.

The Wearing of Veils and its Effect upon the Eyesight.

Dr. Casey A. Wood, in the Boston Medical and Surgical Journal, has made some observations with the object of demonstrating the extent to which veils of various kinds influence the eyesight. He had selected for him a dozen typical specimans of veils. He made his tests with an individual possessing full acuity in each eye for distance and near. He publishes the result of each test and deduces the following conclusions:—(1) That every description of veil affects

more or less the ability to see distinctly, both in the distance and near at hand. (2) The most objectionable kind is the dotted veil, although the influence of this variety for evil is more marked in some samples than in others. (3) Other things being equal, in undotted and non-figured veils, vision is interfered with in direct proportion to the number of meshes per square inch. (4) The texture of the veil plays an important part in the amount and kind of eye-strain produced by the veil. When the sides of the mesh are single, compact threads, the eye is embarrassed very much less in its effort to distinguish objects than when double threads are employed. (5) The least objectionable veil is that without dots, sprays or other figures, but with large regular meshes made with single compact threads.

Is Cancer of Female Organs Ever Transmitted to the Male ?

Volovsky discussed the question of conjugal inoculation of cancer before the Medical and Chirurgical Society of St. Petersburg. A case which he related was faulty as evidence. A woman underwent operation many years ago for cancer of the posterior vaginal fornix. She recovered, and there was no recurrence of this alleged cancer. A year after the operation, this woman's husband suffered from cancer of the prepuce, and died after operation. File, in discussing Volovsky's case, quoted another in his own experience, where a man contracted as he termed it, cancer of the prepuce from genital cancer in his wife. File knew of a case of a woman who died of cancer (no mention is made of the affected part]; when in hospital she was supplied with dainties which she would only just taste, giving them to her husband, who ate them up. He, a month later, developed cancer of the face. As usual, the evidence of transmission of cancer after the fashion of syphilis was not established by this discussion ; Volovsky,s man seems to have become cancerous a year after his wife had been freed from a disease which may not have been cancer. Fil's first case is insufficiently reported, his second is worthless, and neither of the two Russian surgeons made any mention of the possibility of coincidence.

Massage in the Treatment of Muscular Rheumatism.

Graham in Modern Medicine points out that Lumbago may arise from a cold, strain, fatigue, or rheumatism. Its pathology is probably coagulation of the semi fluid contractile muscular substance, and adhesion of muscular fibrils, so that motion gives rise to partial, irregular, and painful contractions. Recent cases of muscular rheumatism are almost invariably cured by massage. The author further states that the same result may be brought about, though not so rapidly, by rest, warmth, electricity, or the use of salicylate of soda. Five different actions are claimed for massage by the author—namely, mechanical, thermal, electrical, nervous, and chemical, and he suggests that when a case of apparently muscular rheumatism does not only yield, but does not remain improved after massage, the probability is that the case is one of neuritis, affecting the nerve fibres that supply the impaired muscles. This probability will be strengthened if the pain is uniform, affecting the same muscles on both sides, if it is worse at night, when at rest and warm in bed, and better when up and moving about. In the case of muscular rheumatism it would be aggravated by motion, and relieved by rest and warmth. Message may thus be used as a means of diagnosis between muscular rheumatism and neuritis.

Suicide has come to be about as common among Russian physicians as duels in German universities. The Lancet explains the epidemic by the statement that fees are tragically low, because of the presence everywhere of heavily endowed dispensaries. But the same is the case throughout a large portion of London itself, where, nevertheless, we do not hear that doctors are particularly given to self-murder. A certain fully-qualified medical man, who passed his examination with brilliancy, is settled in one of the poorest districts of the metropolis, and outside his surgery is painted, in bold Roman letters, "Advice and Medicine, 4½*d*., Superior Ditto, 6*d*."

Whooping cough is said to be relieved by 5 to 10 drops of fennel oil, twice daily.

Astigmatism.

Prof. Dudley S. Reynolds, M. D., of Louisville, Ky., read to the Western Ophthalmological, Otological, Laryngological and Rhinological Association, at St. Louis on the 8th of April, a report on Astigmatism, based on his observations on four thousand six hundred and eighty-six (4686) persons, in which there occurred one thousand four hundred and four (1404) cases of Astigmatism. He said:

"I rely absolutely upon the stenopaic disc, and the test type of Snellen, illuminated always with parallel light, with the patient's accommodation completely suspended. This is the only method which I consider worthy of the confidence of either the patient or the practitioner.

Total number of recorded cases,		4686
Total number of cases of spherical error requiring correction,	3450	
No. of cases with H. in one eye and M. in other,	168—3282	
Astigmatism H in both eyes,	380	
" H Comp. in both eyes,	254	
" H one eye only,	232	
" H Comp. one eye only,	185	
Mixed Astigmatism in both eyes,	54	
" " in one eye only,	37	
Astigmatism M in both eyes.	76	
" M Comp. in both eyes,	89	
" M in one eye only,	44	
" M Comp. in one eye only,	57	
	1408	
Persons with H Astigmatism in one eye and M Astigmatism in the other eye	4—1404	
Astigmatism of oblique axis,	266	
Astigmatism of different degree in each eye,	154	
Astigmatism at right angles in both eyes,	167	
Astigmatism in one eye only.	555	
Astigmatism of same degree and axis in both eyes.	322—1404	

It may be interesting to observe that the mydriatic used in the first 576 cases, in which there were 113 cases of Astigmatism, was sulphate of Atropine. In the remaining 4110 cases in which there 1291 cases of Astigmatism, the mydriatic used was the hydrobromate of homatropine. The manner of employing the latter has been varied; at first I used one grain to two drachms of distilled water, dropping the solution into the eyes every 15 minutes until four applications had been made. This method proving unsatisfactory, I doubled the strength of the solution, and employed it every 5 minutes until four applications had been made. In a large number of experimental observations to determine just when the accommodation is suspended under this method of using the mydriatic, I concluded 35 minutes to be the minimum, and 50 minutes to be the maximum time required to produce complete suspension of accommodation.

In the last 2000 cases, I have employed ten instillations of the homatropine solution, in the strength of one grain to the drachm of water, the instillations being one minute apart. I find that complete suspension of accommodation is almost invariably present 45 minutes after the last instillation, and that the effects have begun to fade away at the end of an hour and a half. I have occasionally found it necessary to repeat the installations, causing the patient to remain another half hour, after the last, and, in the repetition of the instillation, I deem four applications quite sufficient. I have never known a case, even in high grades of Astigmatism, which would not finally succumb to the action of homatropine. I have, twenty or thirty times, found a third repetition of the instillation of homatropine necessary. I use the same strength of solution, and the same mode of application in children and adults alike. I have never known constitutional disturturbance to follow its use, excepting in three instances; two of these were young ladies of very sensitive nervous organization, and one a boy with phimosis.

The asthenopia has not always yielded promptly to the correction of the refraction, but in a large number of instances constitutional treatment has been necessary. Change in diet and habits of life are most essential in nearly every case. The nature of the constitutional medication should always be determined after careful examination of the general condition of the patient. I find patients with severe asthenopia recover quicker under treatment when the use of the eye, for purposes of study, is interdicted, pending the general treatment. Most persons suffering from asthenopia, require better blood, and more sleep. Unfortunately a great many have acquired drug habits. Persons who take yeast bread, cooked fruits, and other forms of glucose suffer necessarily from the pressure, upon the nerve trunks, of the abnormally increased volume of the lymph stream, aside faom the gastric irritation which adds to the

severity of headache, induced by the overtaxed accommodation of the eye. Phenactine, and other drugs of this class, including the bromides, simply aggravate the patient's condition, and no amount of painstaking care in the correction of refraction will relieve such cases. A great many young men whose nervous systems are disturbed by the toxic effects of tobacco are alike troublesome to manage.

Correcting errors of refraction in the eyes relieves those cases of asthenopia found in persons of good general health only. Recovery in all other cases is contingent upon other means of relief.

Puerperal Eclampsia.

Dr. Capers C. Jones of East Lake, read a paper on Eclampsia at the recent meeting of the State Medical Association of Alabama, in which he based his conclusions on thirteen cases occurring in his practice.

The writer adopts the view that toxemia, induced by mal-assimilation and faulty eliminatien—the kidneys being mainly at fault—is the chief cause of the eclampsia, and where no special symptoms of toxemia are present or manifest may be the latent cause. He sees no reason why causes operating to produce convulsions in the non-pregnant should be excluded in forming conclusions as to the etiology of convulsions in the pregnant woman. Enough emphasis has not been given to the nervous temparament peculiar to some women.

Some are so constituted that the severe pains attending the dilation of a rigid os and the maternal parts, in their reflex influence, are sufficient in themselves to induce eclampsia where there is apparently no systemic poisoning. This opinion is strengthened by the ease which this class of convulsions are controlled by sedatives.

Of the 13 cases reported, 10 were primiparæ, 3 were attacked before labor labor; 6 during, and 4 after. One died. The cause was neglected nephritis with general œdema and spasms following natural delivery. The infant mortality was 33 per cent.

In the treatment the writers plan is, edation, prompt delivery, and elimination. Blood letting had been disappointing; but given a plethoric patient with congested or livid face and bounding pulse he would bleed. Even then, relief might be secured by less objectionable measures.

Early delivery was always desirable, but, unless for urgent cause, forcible delivery was discouraged. Had resorted to forceps in 3 of his cases, and turning in one.

To control the spasms he had of late years depended upon veratrum, and chloral when indicated. The dose of veratrum need not exceed 8 to 10 drops hypodermically every hour until the spasms are controlled or the pulse brought down to about 60. Could not understand why a remedy so prompt an reliable should meet with so much opposition among men claiming to be authorities.

Theoretically these measures might seem too depressing, but practically the results were so gratifying, and had been to so many of his professional brethren, that he would use them with confidence in the future.

Carburet of (or Unslaked) Lime in Cancer.

Quite a number of respectable physicians have recently used carburet of lime in cancer of the os uteri, where there is the hemorrhage which many are likely to ascribe to a change of life. The arrest of bleeding is very prompt and lasting. Some introduce a solid piece of the lime directly on the cancer, usually in the os. Some pulverize it and dust it over the abraded or cancer's surface, freely packed with absorbent cotton next to the cancer, then a larger one of oakum, then the cotton to hold the lime in contact with abraded surface and prevent the foul discharge from dribbling away. Do this every third, fourth or seventh day, according to discharge. This style of pack is very efficient, and there is no reflex nervous trouble, which sometimes arise when too much iodoform is used. The natural secretions, mixing with the lime, makes acetyline gas, which relieves pain, prevents fetid discharge, and arrests hemorrhage, and leaves a smooth greyish surface.

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IS EARNESTLY RECOMMENDED as a most reliable FOOD for INFANTS, CHILDREN and Nursing-Mothers;—for INVALIDS and Convalescents;—for Delicate and Aged persons. It is not a stimulant nor a chemical preparation; but a PURE, unsweetened FOOD carefully prepared from the finest growths of wheat, ON WHICH PHYSICIANS CAN DEPEND in FEVERS and in all gastric and enteric diseases. It is easily digested, nourishing and strengthening, assists nature, never interferes with the action of the medicines prescribed, and IS OFTEN THE ONLY FOOD THE STOMACH CAN RETAIN.

SEEMS TO HOLD FIRST PLACE IN THE ESTIMATION OF MEDICAL OBSERVERS.—"*The Feeding of Infants,*" *in the New York Medical Record.*

A good and well made powder of pleasant flavour. CONTAINS NO TRACE OF ANY IMPURITY.—*The Lancet, London, Eng.*

A valuable aid to the physician in the treatment of all the graver forms of gastric and enteric diseases.—*The Prescription.*

As a food for patients recovering from shock attending surgical operations IMPERIAL GRANUM stands pre-eminent.—*The International Journal of Surgery, New York.*

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IMPERIAL GRANUM is acceptable to the palate and also to the most delicate stomach at all periods of life.—*Annual of the Universal Medical Sciences, Philadelphia, Penna.*

Highly recommended and endorsed by the best medical authorities in this country.—*North American Practitioner, Chicago, Ills.*

It has acquired a high reputation, and is adapted to children as well as adults—in fact, we have used it successfully with children from birth.—*The Post Graduate Journal.*

The results attending its use have been very satisfactory.— * * * *M.D., in New York State Medical Reporter.*

Especially valuable in fevers, and often the only food the stomach will tolerate in many gastric and enteric diseases.—*Dominion Medical Monthly, Toronto.*

IMPERIAL GRANUM has stood the test of many years, while many competing foods have come and gone, and have been missed by few or none. But it will have satisfactory results in nutrition far into the future, because it is based on merit and proven success in the past. *The Pharmaceutical Record, N. Y.*

★ 'Physician's-samples' sent free, post-paid, to any physician—or as he may direct. ★

JOHN CARLE & SONS, Wholesale Druggists, 153 Water Street, NEW YORK CITY, N. Y.

An Important Case of Intra-Abdominal Tumors.

To the March issue of the Therapeutic Gazette, Dr. Alfred G. Dale, of Iola, Wisconsin, contributed an original communication entitled, "The History and Treatment of an Interesting Case of Ovarian and Uterine Neoplasms."

He shows that the case is one of unusual interest and merit as a contribution to medical history on account of the large aggregate weight of the neoplasms and the number of different pathological creations in one subject. It is one of the most exaggerated cases of benign neoplastic life.

The case he cited was a German lady, married, 46 years old, giving a good family history and good personal health prior to four years ago. She had never had any children. The patient was suddenly taken with menorrhagia and soon gave evidences of a neoplastic growth in the uterus. Soon afterwards it was discovered that tumors were also growing from the uterine appendages. All operative measures were refused for nearly four years. The foreign growths in the meantime assuming enormous proportions attended by all of the severest symptoms incident to large intra-abdominal tumors. The usual antiseptic precautions were employed and the diseased organs attacked directly by abdominal section.

From the right ovary he found springing a pedunculated unilocular ovarian cyst that contained 18.08 litres (four gallons) of fluid, and removed it by deeply excising the ovary. The left ovary was found sclerotic, and gave rise to four separate multilocular cysts about the size of hen's eggs. Two were simple, the third a proliferating cyst, and the fourth a true cysto-adenoma. Left ôopherectomy removed their attachment.

On further examination the uterus was also found to be invaded, by which, under closer inspection, proved to be an intramural fibro myomata about the size of a large fœtal head. This was removed completely by supra-vaginal hysterectomy. The abdominal wound was closed and dressed in the usual manner.

The four tumors springing from the left ovary, the large one from the right with its fluid, and the uterine fibro-myomata were all weighed and aggregated 56 pounds.

Considerable shock was said to have followed the operation, which was effectually overcome by the internal use of 2 grammes of brandy every 15 minutes, and the hypodermatic administration alternately every hour of 0.6 gramme of tincture digitalis and 0.002 gramme of sulphate strychnine, reinforced by a judicious use of hot water bottles. The patient made a rapid and absolute recovery.

A Deserved European Indorsement.

Health, a weekly journal of medicine and surgery, diet and sanitary science, London, Eng., says editorially:—"We have received from The Antikamnia Chemical Company, St. Louis, Mo., U. S. A., a brochure dealing with the action, history, indications and administration of their preparation, antikamnia. There is no remedy so useful and attended with such satisfactory results in the treatment of melancholia with vaso-motor disturbances, anæmic headaches, emotional distress, and active delusions of apprehension and distrust; and it also increases the appetite and arterial tension, and promotes digestion, as well as being particularly serviceable in relieving the persistent headache which accompanies nervousness.

"In neurasthenia, in mild hysteroid affections, in the various neuralgias, particularly ovarian, and in the nervous tremor so often seen in confirmed drunkards, it is of peculiar service. In angina pectoris this drug has a beneficial action: it relieves the pain and distress in many cases, even when amyl nitrite and nitro-glycerine have failed entirely. In pseudo-angina frequently observed in hysterical women, its action is all that can be desired.

"To patients who suffer from irritable or weak heart, needing at times a pain reliever, it can be taken without untoward after-effects, knowing that the heart is being fortified. It increases the elimination of urea and purifies the blood without increasing the destructive tissue metamorphosis. It lessens coma and loud delirium by contracting the capillaries of the brain. In delirium tremens, it relieves when there is great restlessness with insomnia, as well as general lowering of the nervous power."

Chloralamid-Schering

is a hypnotic of tried and approved value. It possesses undoubted advantages over other hypnotics in Prompt Effect, Reliable Action, Freedom from Evil After-effects and General Superior Therapeutic Value, as confirmed by contributions to current literature by H. C. Wood, W. Hale White, John V. Shoemaker, Chas. L. Dana, Chas. H. Steele, John Aulde, S. V. Clevenger, and many other authorities.

Much depends on the proper administration of Chloralamid to obtain the full effect.

Elixir Chloralamid

presents the hypnotic in most suitable form. Supplied in 8 oz. original bottles. Dose: One tablespoonful (15 grains Chloralamid).

LEHN & FINK, Manufacturing Chemists, NEW YORK.

PAMPHLETS CONTAINING CLINICAL REPORTS, MAILED ON REQUEST.

Personal Experience in Hernia of the Bladder, with Table of Cases.

C. L. Gelson, M. D., in Medical Record, says:

Hernia of the bladder is observed most frequently during the course of the newer operations for the cure of hernia requiring more thorough dissection than in the older less efficient methods. The author has twice seen a hernia of the bladder in his own operations and twice while assisting colleagues all within a year's time. In the first case, a strangulated femoral hernia in a woman of fifty, the bladder was drawn into the femoral opening, when the gangrenous omentum was drawn out. This bladder hernia was, therefore, intraperitoneal. In the second, an inguinal hernia in a man, the bladder was adherent to the fat which was stripped away from the neck of the sac, and the ligature placed around this fat nipped a diverticulum of the bladder, which was cut off. The bladder was sutured with silk, and the hernia wound left open. The final result was good.

It should be firmly impressed on the operator that when an ordinary sac has been exposed and opened, anything resembling another sac should be looked upon with the suspicion that it may be the bladder. All fatty material in the neighborhood of a hernial sac, especially on its inner posterior aspect should be treated as if a portion of the bladder was hidden within it, and should never be cut away till the absence of anything but fat has been demonstrated.

Of the 103 cases collected, the bladder was wounded 67 times with a mortality of 12.70. There were 22 femoral herniæ. The hernia of the bladder is found to be entirely extra-peritoneal in about three-fourths of all the cases.

Treatment of a wound of the bladder should consist in careful suture in two layers, but not through the mucous membrane, fine silk is the best suture material. The deep sutures of the hernial wound may be inserted, but not tied for some days. The entire wound should be packed with gauze for several days, until union of the bladder wound is assured. Permanent catheterization is to be avoided as it is apt to set up serious vesical disturbances. If employed at all it should be reserved for the more dangerous intraperitoneal form of vesical wound.

Applied Christianity Essential to Health.

Dr. J. C. McCandless read a paper before a Christian Association at Chicago, on Health and Christianity. The scriptures were referred to as authority for the use of means and as supporting the theory of medicine, modern 'divine healing' is an insult to the religion of Christ owing to the fact that it must needs be purchased with silver and gold.

The healthiest person or people are those who live closest to Christ and the teachings of scriptures, and that the fourth commandment is a God-given physiological law. Those who seek enjoyment from the continental Sunday make slaves of their fellowmen often to secure revelry.

The intelligent physician inquires of his patient as to the history of the disease and whether we are agnostic or believe we are forced to admit that the sins of the fathers are visited on their children. Similar arguments were presented in defence of the whole decalogue as affecting health. The great commandment of love is more effective than the entreaties of a loving mother, sister or wife in preserving the heart from tobacco and bitterness

The lofty moral teaching of hippocrates is an excellent remedy to free society from moral lepers, and the gospel message of love and peace from the "beloved physician" is the fundamental principles of the arbitration treaty which permits all mankind—brothers by a natural tie—to enjoy the blessings of reciprocity, and thereby secures a prophylatic to the ravages of war. We must believe in divine healing as Jesus taught it as well as the use of means represented in the clay and spittle; but when we consider that all of His patients were made whole, and that He operated on the human heart we must concede Him to be above the ordinary physician.

The dinner of herbs and peace are better than a house full of sacrifice with strife. Restrictions were placed on man's food in the garden of Eden, and the fact that digestive disturbances are so frequent is indicative of necessity to learn the law and the gospel in this matter.

Plain food stuffs then minus the other stuff is the foundation principle of scripture, dietetics. The plain food of scripture, however, includes the finest of the wheat and every other thing good for our physical well being.

The corset is a barbarous custom and often like the 'latest from Paris' it means prostitution of physiological laws, but Christianity appeals both to the folly of man and the vanity of woman, and we find the most intelligent christian women to be the leaders in discording the abominable constrictor.

Bacteriological Data Concerning Xeroform.

From investigations by Drs. Hesse, of Dresden and Shermunski, of St. Petersburg (Wratch, St. Petersburg, 1895, p. 781.)

1. Iodoform has an extremely weak antisecptic action when in the presence of pus, and when, under the influence of light, it has given off small quantities of iodine. Under these circumstances there can be no question of any hindrance to the growth of micro-organisms. Xeroform on the other hand, is so strongly antiseptic that, according to the comparative experiments of Hesse, all growth of cultures was absolutely stopped on all surfaces that were thoroughly covered with the drug.

2. Iodoform is only germ free, when taken from a freshly opened original package. In the receptacles in which it is kept during its use in the clinic it becomes infected with germs which the iodoform does not kill, and which in turn infect the wound in which it is used. And, as iodoform can rarely be taken from a freshly opened original package, it does as a rule so infect the wound. In reality iodoform ought to be sterilized by lengthy treatment with 5 per cent. carbolic acid each time before it is used.

Xeroform on the other hand is and remains sterile, on account of its much stronger antiseptic action.

Xeroform dressings differ radically from those of iodoform in that they can be sterilized at a temperature of 120° C. (230° F.)

The infection of the wound that is the rule where iodoform is used cannot occur with Xeroform and Xeroform dressings.

RESINOL

An absolutely reliable Anti-pruritic, Local Antipyretic, Emollient and Skin Nutrient.

R: Unguentum Resinol.

Resinol, by promptly dissipating capillary hyperæmia, has established itself as the best local application in Erysipelas and other forms of Dermatitis, and as the remedy *par excellence* in all eruptions and irritations of the skin, as *Eczema, Herpes, Acne, Psoriasis, Seborrhœa, Tinea, Capitis, Intertrigo, Sunburn, Eruption of Poison Oak, Burns and Scalds, etc.* Stops the itching of *Pruritus Ani* or *Vulvæ, Itching Piles, Marginal Eczema, etc.*, instantaneously, and immediately subdues the firery inflammation of *Vulvitis, Balanitis, etc.*

Resinol is a harmless antiseptic and a true skin anæsthetic, absolutely non-irritant and non toxic (free from lead, mercury, or cocaine), can be applied to mucous, excoriated or denuded surfaces of any extent at any age without fear of untoward results, and is not contra-indicated by any internal medication that may be deemed advisable.

OPINIONS FROM THE PROFESSION.

From **H. S. CUNNINGHAM, M. D.,** *Prof. of Gynecology and Clin. Dis. of Women, Amer. Med. Col., Indianapolis, Ind.:* "I have been delighted with the action of RESINOL in Pruritus Vulvæ, Tinea Capitis, etc."

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From **W. S. ROFE, A. M, M. D.,** *Anita, Iowa:* "As an ideal sedative RESINOL has no equal, and in all eruptions of the skin I shall always use it in preference to anything else."

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Sample sent **free** on application, or **one** regular size jar for trial on receipt of 25 cents.

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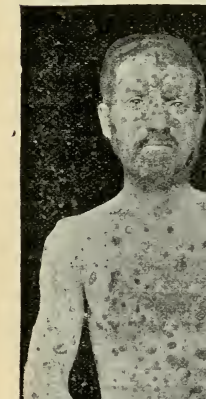
Mistura Quinqui Iodidorum.



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Potassii Iodidum,.....2½ grains.
Mauganesii Iodidum,.....1-5 grains.

In Secondary and Tertiary Syphilis this preparation is considered by all the leading authorities on the subject to be the best. It should be given in teaspoonful doses, three or four times a day, and continued for several months.

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CHARLOTTE, N. C.

Dr. C. Earle Williams, (Boston Medical and Surgical Journal) in an article entitled. "A readily assimilated and non-irritating preperation of iron," confirms the results other investigators have obtained by the use of iron in organic combination. Albuminate of iron preceeded the long series of organic iron compounds seeking recognition by the medical profession; it successfully maintains its reputation; given positive results because easy of assimilation, and is cheaper than other preparations of its class; and it is obtainable only on physicians prescriptions. Dr. Williams says :

For the last two and a half years I have been using a preparation of iron, that from my clinical experience has acted both promptly and efficiently in cases of anemia and chlorosis—a fluid albuminate of iron manufactured by Dr. H. G. Drees, in Bentheim, Germany. It is a thick, albuminous liquid of reddish-brown color; when diluted it has a pleasant aromatic odor and taste, and is of neutral reaction. It represents a salt in which the acid is replaced by albumin. It is of a definite proportion, containing five per cent. of oxide of iron. I have found that under its administration the blood becomes richer, the red corpuscles and hemoglobin increase in quantity, the face gains color, and the patient improves in strength and is luster. It has acted well in my hands in cases of anemia which depend on specific poisons, in conjunction with the proper specific.

The effect of its action is remarkable upon the dyspnea of chlorotic girls,where there is pallor amounting to waxiness from absolute diminution in the number of red corpuscles, where there is marked shortness of breath from lack of oxygen, and where there is a general loss of body temperature from imperfect oxidation. It quickly iuduces a change and restores matters to their normal condition.

It is of little use to give hematics which do not assimilate. We know that in many cases of anemia, the ordinary methods of giving the tincture of the chloride and inorganic compounds of iron totally fail, especially in those cases caused by impaired elimination of nitrogenized waste. I find that it is readily digested, does not affect the teeth, and that its taste is not objectionable. I have not found the blackened feces during its administration which usually occur when other preparations of iron are given, the color of the stools appearing to me an indication as to how far the drug is assimilated and likely to prove useful. I have found it a decidedly efficient hematic in anemia following acute disease, and it acts well with children, the yonngest being able to take it without any gastric disturbance. It has been highly recommended as a curative agent in gastric ulcer by Prof. Crozer-Griffith, of Philadelphia, and De Gempt, of Germany, although I have had no personal experience of its action in that disease.

To sum up the advantages of Drees' albuminate of iron: it is readily assimilated easily digested, is without astringent action on the digestive tract, does not injure the teeth, and is more prompt in its results than other preparations of iron that I have used.

We quote from The American Year-Book of Medicine and Surgery, Gould—1897—Department of general surgery by W. W. Keen, M. D., and John Chalmers Da Costa, M. D., of Philadelphia, the following:

"Trial has been made of Eucaine in the out-patient surgical department of Jefferson Hospital, and the results have been most satisfactory. In the removal of ingrown toenails we have a procedure which brings a local anesthetic to the test, and in these usually painful operations *Eucaine ras proved more satisfactory than cocaine, the anesthesia from Eucaine being more profound and prolonged and widespread than is that from cocaine.*"

Nester Tirard, M. D., London, F. R. C. P., Professor of Materia Medica and Therapeutics, King's College, London, Physician to King's College Hospital and to the Evelina Hospital for Sick Children in his "Summary of the Therapeutics of the Xear 1895-96," says on page 445 of the "Year Book of Treatment" 1897, published by Messrs. Lea Bros. & Co., 708 Sansom St., Philadelphia, as follows:

"The new remedies which claim attention are not so numerous as usual, and with the exception, perhaps, of *Eucaine*, it cannot be said that they present any striking characteristics."

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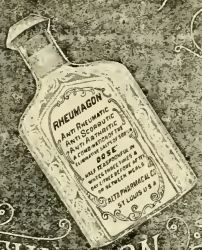

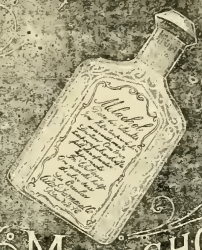

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SEND FOR LITERATURE.

Some Suggestions Regarding Lacerated Perineii, Sequelae, and Treatment.

In a recent article appearing in the Medical Record of Mississippi, entitled "Some suggestions regarding lacerated perineii, sequelae, and treatment," the author, Dr. J. A. Crisler, of Canton, Miss., says, that the recognized simplicity of the operations on the perimeum causes more than one Doctor to fail to perform successful operations on that body, as the whole energy seems bent on the very necessary proceedure of removing all the cicatricial tissue, this being done, they frequently feel that the most important step has been taken, and very carefully apply the sutures. Indeed some authorities claim that good union can be had from one or two sutures.

He prefers a goodly number of sutures, passed deep in the muscular substance, in order to hold the two vivified edges in close contact, so that there may be an inflammatory adhesion between the muscles themselves, and not merely of the loose cellular tissues that invariably yields sooner or later to the weight from above, leaving the patient in the same condition as before the operation, except for the absence of scar tissue.

It is a fact, that many otherwise good operators, pronounce their operations a success, when a later examination would surprise them by showing the two sides of the body still separated, with loose cellular tissue intervening, and no muscular union whatsoever.

The author attributes this to carelessness engendered by the utter simplicity of the operation, and not to a lack of anatomical knowledge, nor a dim perception of inflammatory laws.

He recommends that the cicatricial tissue, after being well directed up, be left without removing, any part of it, as after suturing it acts as a protector against infection from the vaginal discharges or urine.

In cases of prolapsus uteri and pelvic engorgement, due to lacerations of long standing, he considers it of greatest importance to thoroughly deplete the uteres by curettage, gauge packings, tampons and hot vaginal injections, with rest in bed, before the operation for repair.

Except in cases of laceration of the rectal wall, he uses silk-worm gut, sutures; and as an anæthetic finds cocaine satisfactory, never having seen any unfavorable, symptoms resulting from its use, worthy of mention. He never uses gauge protectives over the repaired area, but finds sterilized vaseline to fulfill all the requirements as a safeguard against vaginal infection, or infection from without, as well as a barrier against contamination from urine.

After the operation he allows the patient to assume a natural position when urinating, which facilitates the action of the blader thereby dispensing with the use of the catheter.

Pneumococci in Nasal Secretions in Infants.

Dr. Thos. F. Rumbold, in the St. Louis Med. and Surg. Journal, says: The frequency of the coincidence of sudden ear troubles and pneumonia suggests that this kind of nasal secretion may be a predisposing cause of the pneumonia, at this age at least. I know a physician who said he always gave rabbits pneumonia when he gave them a hypodermic injection of his saliva. I remarked to him; "You may have had a cold in your head at the time; if so, your saliva more than likely had pneumococci in it, as every slide with this kind of saliva that I have examined since 1888 had this kind of bacteria in it." The nasal secretion during a cold in the head is frequently drawn down the pharyngo-nasal cavity and into the mouth and spat out. At these times the saliva is sure to be impregnated with the various kinds of bacteria contained in the nasal cavities. According to my experience, injections of saliva of persons who have no cold in the head will not cause a pneumonia, I admit that my experience in this respect is limited. I have made but about twenty hypodermic injections of saliva from healthy persons, and most of the injections were made into four rabbits. In one rabbit I made seven injections of the saliva of seven different healthy persons. After this I made an injection of saliva from a person who was suffering from a severe cold, and killed the animal, it dying of pneumonia. To speak with positiveness on this matter one should have made a large number of carefully noted injections of both kinds of saliva.

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Thrombosis of the Lateral Sinus.

At the annual meeting of the Western Ophthalmological, Laryngological, Otological and Rhinological Association, held in St. Louis, April 8th and 9th, Dr. B. F. Church, of Dallas, Texas, presented a paper entitled "Thrombosis of the Lateral Sinus," in substance as follows:

Not until 1880 was the practicability of opening and removing inflammatory products from the lateral sinus suggested, and then by Zanfol, who, four years later, reported a case in which he opened and washed out the sinus. This operation inaugurated a very important advancement in surgery. No doubt that many lives have been sacrificed, even by surgeons competent to operate, by waiting too long for positive localized symptoms to appear. In grave conditions of this character, the surgeon is entirely justifiable in making exploratory investigations by laying the sinus bare and introducing a sterilized hypodermic needle to learn the character of the vein's contents.

Like cerebral abscess, thrombosis of the lateral sinus comes from middle ear infection.

The most valuable diagnostic sign is phlebitis of the internal jugular vein which feels hard and is extremely sensitive to the touch. Sudden rise and fall of the temperature, which may reach 105 or 107° F., is a characteristic symptom. Rapid pulse, stupor, vomiting, constipation and persistant headache are usual symptoms, the same, however, as found in cerebral abscess. Moos claims that œdema of the temporal region is a pathognomonic symptom of thrombosis of the lateral sinus. Choked disc is some times found.

When operating, in all cases, first thoroughly evacuate all inflammatory products from the middle ear, antrum, and mastoid cells, then enlarge the wound backward and lay the sinus bare.

Most English writers favor ligating the internal jugular vein before opening the sinus. Such a procedure is probably not necessary or advisable, unless there is evidence that it contains septic material. If the sinus is filled by a fibrinous clot, ligation is clearly not indicated.

Proceed by laying the sinus open along the length of its exposure in the skull wound, remove all particles of clot that can be reached by means of a small curette—compression, in the mean time, being made over the internal jugular vein —wash out with a normal salt solution and pack with iodoform gauze. When necessary to ligate the jugular vein, the best point is low down near the clavicles.

Eserine.

Eserine for instillation into the eye is used in solution of $\frac{1}{2}$—4 grains to the ounce of distilled water. It is well to add a few grains of boric acid to preserve its purity and some cocaine to lessen its tendency to cause twitchings of the lids, etc.

Eserine contracts the pupil. Atropine dilates it. Eserine stimulates the ciliary muscles. Atropine paralyses it. Eserine produces spasm of the accommodation Atropine relaxes it. Eserine may reduce the intraocular tension. Atropine may increase it. Eserine is shorter in its effects than atropine. Atropine is much stronger in its action than eserine.

Eserine should not be used when there is spasm of accommodation, follicular conjunctivitis, irritis present or suspected and in the aged phlyctenulae. Eserine ¼ 1 grain—ounce is curative by its action on the blood vessels. One drop 3 or 4 times a day. It does not prevent the use of the eyes as atropine does.

Corneal ulcers when on the margin of the cornea are well treated with a very weak solution to keep the iris out of the way if a rupture occurs. It is not so ap to protrude and acts as a valve.

In conical cornea used in weak solution three times a day it will aid othe measures in incipient cases.

Ciliary fatigue is helped by a morning and evening instillation of eserine 1-2 gr.—ounce one drop.

In glaucoma it is *the* drug. One grai to the ounce. One drop every four hours It draws the iris away from the angl formed at the junction of the cornea an iris thus permitting freer drainage fro the eye and thus reducing the intraocula tension.

Eserine is best used in strength nev to exceed one grain to the ounce. Th strength will accomplish all result Stronger may do much harm.

Diseases of the Glosso-Epiglotic Space†

The author reads the paper believing that individual experiences upon diseases of the spaces should be more frequently recorded regarding a subject so new in literature, he having seen a number of cases that had been treated scientifically for catarrhal conditions in other parts of the upper air tract, but the glosso-epiglotic spaces having been either overlooked or ignored, the patients regarded themselves as uncured.

Pathological conditions present, given in the order of frequency of the author's cases were: Enlarged lingual tonsil, observed in varying degrees in more than twenty per cent. of all cases examined. Varicose veins in more than one per cent. of consecutive cases of all ages; but limiting the cases to those over forty years of age the per cent. is much increased.

Two cases of papilloma were mentioned, one of a gentleman, age 35, whose integumentary surface was studded with warts in many places. Fibro sarcoma and carcinoma had been seen by the author. The case of a secondary fibrosarcoma of lingual tonsil, weighing more than an ounce upon removal, was related somewhat fully. Syphilitic and tubercular ulcers were regarded as frequent, but it was not the purpose of the paper to discuss them.

Symptoms not Constant.—Many cases with very large tumors in these spaces make no complaint, and have no knowledge of any throat disease. An epiglottis unduly curved toward base of tongue is a predisposing cause. In such cases a small growth or enlarged vein may give rise to very distressing symptoms. Symptoms in order of frequency in author's cases are cough, hemming, feeling of stricture, or lump in the throat, difficult respiration, deglutition and hæmorrhage. He has seen, rarely, cases of functional heart disease and histeria, which he believed clearly traceable to growths of these spaces. Acute and chronic inflammations are fouud here as in faucial tonsils.

Treatment should, in many cases, be both constitutional and local. Anæmia and nervous disorders require medicines most frequently. Lingual tonsils are innocent as to life. and should not be disturbed when the patient is not aware of their presence. When local treatment is neccssary, complete removal is advised by means of the snare when the growth projects sufficiently; by the lingual tonsilotome in small or flat growths. The electro-cautery gives rise to too much swelling even when used carefully. Is regarded as the most efficient treatment, however, for varicose veins. Early extirpation of malignant growths here should be the rule as elsewhere. Iodine compounds are too slow of action to be commonly used. Chappell's iodine and carbolic acid solution is the best when solutions are selected.

†Abstract of a paper read before the Western Oph., Oto., Laryn. and Rhinol. Asso., St. Louis, April 8th, 1897, by Dr. J. F. Barnhill.

Case of Tuberculosis Cured by Cancrum Oris.†

Miss P., of Abingdon, Va., was brought to my private hospital, November 9th, 1895. She had a hacking cough, enlargement of the glands of the neck, and consolidation of the apex of one lung. I dignosed phthisis pulmonalis, prescribed constitutional remedies, and advised her being taken to some more suitable climate for the winter.

Before she could make arrangements to leave the hospital she had a severe chill, followed by high fever and a very sore throat. In a few days she developed a typical case of noma, or cancrum oris. The disease attacked the left cheek and when the slough seprated, an opening was left as large as a silver dollar, exposing the teeth and rendering feeding difficult. There was high fever, typhodial delirium and great prostration.

The wound was cauterized and disinfected, and heroic measures used to feed and stimulate the patient, but the symptoms grew worse and little hope of recovery was given to the relatives.

Finally, as a last resort, I began the use of Protonuclein, giving the tablets internally and dusting the powder on the wound. An immediate improvement followed, and after a long and trying convalescence the patient was able to return home.

A year later she returned to the hospi-

†Hunter McGuire in Bi-Monthly Bulletin of the University College of Medicine.

tal to have a plastic operation done to lessen the deformity of the scar, and when she first entered my office I scarcely recognized the healthy, vigorous woman as my former tuberculous patient. The enlarged cervical glands had disappeared, her lungs were clear, her cough was gone. She had been cured of tubercul osis by the attack of cancrum oris. I have no explanation to offer for the result, but trust the clinical fact may prove of interest to the pathologist.

Alimentation in Nervous Disorders.

In his recently published work on "Functional Disorders of the Nervous System in Women" Dr. T. J. McGillicuddy empasizes the value of beef in the diet of neurotic patients. His remarks on this head are as follows: "Of especial value are the proteid or tissue building foods and the one which stands at the head of the list, because of its utility in these cases is beef. It is difficult to show the importance of the selection of a correct amount of the different classes of food. If a certain class is taken in excess there is imperfect assimilation, and disease slowly but surely results. I have known fatal diabetes to result from excessive indulgence in raisins. Oatmeal mush, fermenting in the intestines, is a common factor in the production of nephritis. A vegetable diet contains an injurious amount of the carbohydrates and too little of the proteid element, which in this combination is difficult of digestion. That a meat diet, with a moderate proportion of carbo-hydrates is the best food for neurotics has been frequently demonstrated clinically. Milk has not so great a food value as meat because of the sugar it contains, its lack of reparative material not four per cent. of proteids, and the great danger of its being impure." In view of the repugnance to a meat diet which sometimes exists in neurotic persons, some authors have recommended the addition of somatose which is a concentrated preparation of the nutritive elements of meat in the form of albumoses. This product does not tax the digestive organs, and being practically tasteless and odorless and soluble in all ordinary fluids, it can be administered in a variety of ways to suit the palate of the most fastidious patient. Owing to the ease and completeness with which somatose is digested and assimilated and its stimulating effect upon the appetite a rapid gain in flesh and strength follows its adminis tration, with improvement of the nervous disturbances.

Pemphigus Vulgaris.

Drs. Bloom and Robins (American Practitioner and News) report a case of Pemphigus Vulgaris in a white girl eight years old. Before the attack she was anæmic and irritable in disposition.

The disease showed itself abruptly, a chill preceding the fever and outbreak of blebs, which appeared in crops at irregular intervals for three weeks, after which no new ones were formed, until a few occurred one month later, after constitutional treatment had been stopped.

The blisters, varying from pea to goose egg in size, were first seen on the belly wall, but at the close of the attack nearly every part of the skin of the body had been more or less invaded. Even the palms of the hands and soles of the feet, the face and mucous membrane of the mouth had been affected.

Special predilection was shown for the belly wall, external genitals, lower limbs, and dorsal surface of hands and feet.

The temperature became permanently normal one week after the blebs no longer formed. The fever was highest (103.5°) at the close of the first week, when the rupture was severest.

She ate and slept well, and was rather apethetic, except during the renewing of the dressings, when she was always nervous.

The internal treatment was Fowler's solution, given as high as seven drops three times daily, gradually diminished as the improvement increased. Locally, the lobe of the blisters were cut off daily, and after the serum had drained away, gauze spread with 5 per cent. boric acid vaseline was applied, over which was placed surgical cotton secured by a bandage.

This case is interesting by reason of the appearance of some urticarial-like lesions on which the blebs later appeared, and also on account of an erythema which developed toward the close of the disease.

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Listerism.

We clip the following from the Medical Times and Hospital Gazette in reference to Lord Lister and his teachings.

Some twenty years ago, Lister and his antiseptics were constant sources of amusement among the leading surgeons of our larger hospitals. Many a sneering remark at Lister's expense have I heard from the lips of the leading surgeons of that day. Their tongues are quiet enough now—except to flatter. From one quarter, however, Lord Lister aeceives scant praise—that is from Glasgow. It matters not to Professor Campbell Black of that city what honours, British and foreign, are conferred on Lord Lister; he consistently denounce him and all his antiseptic works. In his valedictory address to the students of Anderson's Medical College last week the Professor described Listerism as one of the most humiliating sugical feiishes of the nineteenth century. Lister, he said, had befooled the surgical world for a quarter of a century. He adopted a ritual in surgery which had to be most strictly adhered to. If they had stepped into the infirmary they would have found the high priest and his acolytes disguised like deep-sea divers, "having washed their robes in carbolic acid and made them white." He followed up these remarks with others of a character rarely indulged in by men of science in the lecture theatre.

Mr. J. Pierpont Morgan has contributed $1,000,000 for the erection of a new building for the New York Lying-in Hospital, on condition that sufficient money is raised to carry on the work of the hospital in accord with its enlarged facilities.

The Missouri Board of Health have recommended that the cause and prevention of consumption be taught in the public schools of that

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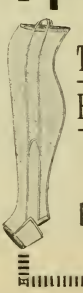
and won't rip—the stays prevent it



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Turpentine, Its Uses in Medicine and Surgery,

By FRANK H. RUSSELL, Wilmington, N. C.

Turpentine is obtained from the Pine tree (Pinus, Gr. Pitos). This name was given it by the ancients. A genus of trees of the natural order coniferæ, distinguished by monœcious flowers and woody cones, with numerous two seeded scales, the scales having an angular truncated apex. The leaves are narrow, long, dark green in color, growing in clusters or pairs, bound together at the base.

The long leaf Pine (Pinus Australis) (when growing in moist places called Pinus Palustris) yields an abundance of turpentine. It grows from 60 to 80 feet high, 18 to 22 inches in diameter; leaves are 10 to 15 inches long, of a bright green tint, and spring from white sheaths. The wood is close grained and resinous.

Its products are four in number. (1) Rosin; (2) Turpentine; (3) Tar; (4) Pitch. It is productive for about 9 years.

Spirits of Turpentine is obtained from crude turpentine, which is the sap of the tree, and is known as, (1) virgin dip, the product of the tree for the first year after being tapped. It is of straw color at first, and grows opaque after exposure to the air. One hundred pounds yields about 2½ gallons of spirits. For the next four years the product is called (2) yellow dip. This does

not yield quite so much spirits as the "virgin dip." (3) Scrape is the name of the product obtained during the last years of the trees productiveness. It is a wax like substance, and yields a very small quantity of spirits.

These products are collected as follows: A cut several inches deep is made near the root of the tree. This is called a box, and holds about 2 quarts of the sap. Sometimes several boxes are cut in one tree. When the boxes are full they are dipped out by a man with a flat spoon-like instrument. About ten times through the season the boxes are hacked, that is a chip is taken out just above the box, making bare a large surface on the tree. When the last year of a tree's usefulness comes, it is chipped up about 15 feet.

To obtain the spirits the sap must go through a process of distillation, this is done by placing it in large copper kettles, set in brick work, the fire being applied directly to the bottom of the kettle, these are made to hold from 10 to 30 barrels, the tap connects by an arm with the worm around which water runs. After being melted it is allowed to cool slightly and the surface is skimmed off, chips and pieces of bark being found on it. The spirits is candensed in the worm and runs out with some water into a large tub, being of less specific gravity than water, and not being miscible it comes to the top, and is skimmed off and put into tight barrels. It is rectified by distillation with water and alkaline carbonates, and the water which the oil carries over with it is removed by further distillation with calcium chloride. Its formula is $C_{20}\ H_{16}$, sp. gr., 0.864, boiling point 3.20 deg. F.; a colorless liquid, of oily consistence, strong characteristic odor, hot disagreeable taste. It is readily soluble in alcohol ether, the fixed and essential oils. On exposure to the air it dries to a solid resin, and when oxidized in the presence of water gives off peroxide of hydrogen. It is also a producer of ozone.

PHYSIOLOGICAL ACTION.

Externally.—When applied to the unbroken skin it causes heat and redness, followed by a vesicular eruption, stimulates the local circulation, irritates and then depresses the local nerves; it is anti-septic, disinfectant, arrests fermentation and putrefaction, and is absorbed by the skin.

Internally.—When taken in the stomach is a disinfectant, slightly stimulates the vessels and depresses the nerves. It passes on into the intestiness, where it is found as turpentine. In large doses it is purgative and anthelmintic. The vapor when inhaled acts as a disinfectant and stimulant to the mucous membrane of the bronchi. It enters the blood and is found there as turpentine, it diffuses with rapidity and is soon recognized in the sweat, breath and urine.

Specific Action.—First it stimulates, then depresses. After a full dose is taken a feeling of langor, dulness, debility, and nausea follows; then coma, the pupils being dilated. The heart's action is lessened and as a result the blood pressure falls.

Remote Local Action.—It is excreted by the cutaneous and mammary glands, by the respiratory organs, kidneys, possibly the liver, and glands of the intestines. The sweat is increased and an eruption may appear on the skin. In the lungs it acts as a vascular stimulant and disinfectant. It often produces symptoms of irritation and congestion in the urinary organs, severe lumbar pains, frequent and painful attempts at micturition, a feeling of spasm in the perinæum, and often hæmaturia. On account of this unfavorable action, which so often follows its administration, we are prevented from using it as often as we otherwise would. However, it has a very wide and useful application in medicine and surgery.

Uses—Surgical.—It has long been used in cases of gangrene as a local application, old ulcers, as a local application also in sprains and bruises. In many households the ordinary treatment for small wounds is to apply turpentine and wrap up. Very often the laborers in chipping the boxes cut themselves and their treatment is to make a plaster of the gum and apply. It is said they seldom have a suppurating wound.

Its uses in the past have been insignificant, but with such authority as the successful abdeminal surgeon, Mr. Lawson Tait, to say that it is his favorite as a cleansing agent to self, patient, and instruments before an operation, it should have a field of usefulness second to no other cleansing agent.

In an article entitled "Cleansing and Cleanliness in Abdominal Surgeon's Operations," by Mr. Lawson Tait, published in the N. Y. Medical Record of Dec. 19th, 1896. He says:

"After every operation, every instrument used should be scrubed with raw turpentine and a brush, then well washed with soap and water. If this is done simple emersion in cold tap water at the next operation is all that is wanted."

In speaking of the preparation of the hands, he says: "I take the precaution of keeping my nails short and clean, and washing my hands in raw turpentine the last thing before performing any operation, and then washing off the turpentine with soap and water."

I think there will in the future be a place in the satchel of many physicians for a bottle of turpentine. If we follow Mr. Lawson Tait we will not have the trouble of preparing our antiseptic solution in a separate vessel or of boiling our instruments for a long while. It does not harden the skin like bichloride of mercury, and is not so poisonous.

I have used it every chance I have had since reading Mr. Tait's paper, and like it better than the mode of cleansing with bichloride, alcohol, etc. It is certainly a cleansing agent, and cleanliness is the secret of success in surgery.

Medical Uses.—Typhoid fever, for the abdominal pain and tympanites this is our best remedy, in the complication of peritonitis, used as the turpentine stupe.

Internal Use.—It is usually put down in our text books, when the tongue has a heavy, dry, brown coat on it, cracked and coming off in spots, leaving the underlying surface glazed, when there is tympany and the alvine discharges consists of fluid fæces with a bad odor or scybalæ, turpentine is indicated. It is best given in the form of an emulsion, or in the ordinary gelatin capsule. The nurse may drop the dose in as required. It is antiseptic, preventing putrefactive changes in the intestines, gives tonicity to the intestinal mucosa, acts as a sedative to the local nerves and relieves pain.

In Hemorrhage.—When taken per orem it passes through the stomach and is found in the intestines as turpentine, where it exerts its power as a vascular stimulant, causing the muscular fibres of the bleeding vessel to contract.

Typhus fever, when there is great depression of the vaso-motor nervous system, dry brown tongue and tympanites, turpentine is useful.

Small Pox—Turpentine and olive oil has been used on the eruption, to prevent pitting.

Scarlet Fever—Turpentine is often used in the throat symptoms.

Whooping Cough—It is one of the numerous remedies employed in this disease.

Cerebro-Spinal Meningitis—It is recommended.

Diphtheria—The turpentine treatment has been much used.

It is also used in cholera, yellow fever and dysentery.

Tuberculosis.—It has long been noticed that in a turpentine country tuberculosis is rare on account of the pure air, made so by the turpentine diffused and ozone produced. If a case of incipient phthisis is sent to a dry climate where pine forests abound, the chances are that the invasion of the disease will be checked and the patient restored to health. Southern Pines, N. C., possesses these qualities, and is being resorted to. Turpentine is used by inhalation or by diffusion through the air of a room.

In small doses per orem it has a good effect on the cough, night sweats and diarrhœa.

CONSTITUTIONAL DISEASES.

Acute Rheumatism.—Counter irritation around the affected joints; has a beneficial effect.

Muscular Rheumatism.—Counter irritation, with turpentine, useful.

Hemophilia.—Said by some to be useful.

DISEASES OF THE DIGESTIVE SYSTEM.

Chronic Pharyngitis.—Applications of pure turpentine often curative; also useful in follicular pharyngitis.

Cancer of Stomach.—Small doses are often used.

Entero-Colitis.—Useful given internally and applied externally.

Often used in biliary calculi and congestion of the liver.

Peritonitis.—The turpentine stupe is one of our most useful remedies in this trouble.

DISEASES OF THE RESPIRATORY SYSTEM.

Acute Laryngitis.—Place a paper over and around patient's head, and let him inhale steam from a basin of water with turpentine stirred in it. This procedure is also useful in membranous laryngitis.

Acute Bronchitis.—Used by inhalation and given internally; also used in bronchiectasis for the fœtid secretion; congestion of the lungs to produce counter irritation.

Pneumonia.—Used by inhalation and internally.

Pleurisy.—Used as a counter irritant.

SKIN DISEASES.

Used in chronic eczema, psorasis, alopecia.

DISEASES OF THE NERVOUS SYSTEM.

It has often been used in cerebro-spinal meningitis, epilepsy, ticdruloureaux, and sciatica.

GENITO-URINARY DISEASES.

Chronic catarrh of bladder, incontinence of urine, chronic gonorrhœa, and gleet.

Turpentine is also a useful anthelmintic, and given as an adjuvant to an enema, makes it stimulating.

In considering the numerous troubles for which we may beneficially employ turpentine, we find that it makes a useful member of our materia medica.

212 Market St.

Lupus Vulgaris.†

By Dr. Eugene B. Glenn, Asheville, N. C.

Owing to the short time I have had to prepare a paper for this evening, I will, necessarially have to be brief, hoping to introduce a subject which seems of so much importance relative to diagnosis and treatment as does lupus vulgaris.

This disease is rare in this country, as compared with other countries, as, for example, Austria.

It is often with considerable difficulty that the general practitioner makes a diagnosis of this disease.

Lupus is the "cancer" so often cured by quacks.

It is generally considered today that lupus vulgaris is a cutaneous tuberculosis—a disease of the integumentary tissues, due to the invasion of its parts by the tubercle bacillus. The disease as a rule is slow in its course, especially at first, often taking years for the area involved to reach the size of one or two square inches.

I have a case under treatment at present, which began nearly two years ago that has spread over 3 or 4 square inches.

I saw it when it first began; under treatment it got almost well, when it passed from my observation. A few months ago the patient came back to me, doing without treatment during the time away. It began as a flat, insignificant infiltration of small-pea-size, of brownish-red appearance.

In several weeks ulcerative changes were followed by cicatrization, somewhat tough, hard and fibrous.

While this was going on the diseased area gradually grew larger by the appearance of the same brownish-red or apple-butter colored deposits, some immediately continuous with the borders already formed, others appearing as closely outlying islets which later became confluent with the original area. This lesion appeared on the left lumbar region of a man about 24 years old.

About the region of the nose, eye, or mouth, are not uncommon sights and considerable disfigurement occurs both from active manifestations and cicatricial contractions, it often proves hideously destructive.

The scars left by its healing are apt to break down; it may be progressing at one point and heeling at another. The ulcer is often crusted over. It usually begins in childhood or early adolescence; but to this there are exceptions, although it is rare to see it after middle life. This disease is contagious in the sense that it is inoculable. Cases have been reported by observers of communication of this disease to children by consumptive relative and by vaccination.

The three ulcerative diseases of the skin which, I think, need concern the general practitioner most are lupus vulgaris, epithelioma, and syphilis.

Epithelioma of the rodent ulcer type occasionally bears resemblance. But the area involved is usually single, begins commonly late in life, and has a peculiar role-like border.

Clinically it is separated from lupus by the presence of a hard base.

The bacilli of tubercle may be cultivated from lupus.

The greater difficulty comes in distinguishing lupus from tubercular syphilodum, because these two diseases are strikingly similar in their symptomatology. However, there are differences which will serve as a rule to prevent mistakes.

Tubercular syphilodum is much more rapid in its course, involving in a given time much more territory than that covered by lupus.

A square inch sized area for lupus may mean several years' duration, but for syphilis it may mean only a few months.

Tubercular syphilodum commonly makes its appearance in middle or late life, while lupus usually has its beginning in childhood or early adolescence.

The common sight of lupus is some part of the face, though it may occur elsewhere independently, if so, as a rule, it is in conjunction with the disease on the face.

Syphilis occurs upon almost any part independently, although the face is not an uncommon sight. Syphilis is more of a coppery-red, whilst that of lupus is of a brownish-red color. Cresentic and serpiginous groupings, cresentic and horse-shoe shaped ulcerations are common in syphilis and uncommon in lupus. Purulent discharges may be moderate or profuse in the ulcerations of syphilis, and scanty or absent in lupus.

The ulcerations in lupus are almost invariably superficial, whilst those of syphilis may be superficial or deep.

Destruction of bones is rarely if ever seen in lupus, however, bone in syphilis may share the destruction.

Cicatricial formation in lupus is often thick, dense, and tough; in syphilis it is usually soft.

The differentiation of the non-ulcerating types of lupus and syphilis are more difficult than the more common, or ulcerating types, The history is sometimes valuable. Not infrequently the patient with lupus comes of a tubercular family, or may be suffering

†Read before the Buncombe County Medical Society, March 1st, 1897.

with tubercular involvement of the lungs or will give evidences of a scrofulous character.

The patient, referred to above, has a family history of tuberculosis; his mother died with it. In syphilis not infrequently a history or evidences of syphilis can be elicited, but not always.

The respectability of the patient should not have too much bearing, however, it is of some importance. The admitted respectability of the patient is one of the most common causes for a mistake, by those who place much importance on this feature, such cases being almost invariably treated as lupus.

Tubercular syphilidum is not an uncommon disease, and lupus is comparatively rare. So it matters not in whom it may occur, if the general practitioner is going to allow himself any latitude it should be to consider eruptions with atrophic or ulcerative tendencies to be syphilitic rather than that of lupus, unless he has very positive reasons for considering the contrary. My opinion is it is much safer for the general practitioner to withhold his opinion, or express himself gradually, when the diagnosis can't be made without difficulty or with certainty, and in the meantime treat the patient as if the disease were of specific origin.

With rare exceptions the use of the ordinary anti-syphilitic treatment, with a placebo, such as cold cream or vaseline, will make a great change in a week or two, whereas the result in such constitutional treatment in lupus would be nil.

The treatment of lupus has in view the patient's general health, and the employment of local measures having as an object destruction or removal of the diseased tissue. It is my belief that cod liver oil in moderate doses, long continued, has in some cases a material influence in limiting the activity of the disease and in aiding towards making the results from local treatment more permanently favorable, by rendering the soil less favorable for the growth and multiplication of the bacillus. Other tonics, such as the hypophosphites, may be given when indicated.

The use of tuberculin is not to be advised except in persistent cases, and only then after other measures have repeatedly failed and then with caution, as its use is not without danger.

As to local measures: Recently, Doutslepont, White, and Stilwagon, have used mercurial applications in the more extensive cases and in some instances with good results. The strongest applications just short of irritation should be used.

Even in those cases in which a beneficial influence is excited, its effect is usually slow and is not uniformly satisfactory as one soon learns, but its effects in some cases is so favorable as to be suggested as a beginning method of treatment. Ordinarily mild methods exert but little influence, and in cases in which time is a consideration destructive measures will be best from the first.

Various operative methods are in vogue, all having in view the one object, destruction or removal, and each has its advocates. In this paper it will be impossible to go into detail of them, but will mention some of the most satisfactory methods.

The selection of a method is often influenced by the desires and fear of the patient.

For those who will not submit to an operation, caustic applications are to be advised, Pyrogalic acid in the form of a stiff ointment is the mildest, usually painless and often efficient.

This is spread upon patent lint, or other suitable material and kept closely applied to the parts, changing to a fresh plaster twice daily, At each removal the parts are dried with a piece of soft cotton, and any loose skin, crust, scab, or slough is removed. In 5 to 8 days a slough of variable thickness will form, more or less adherent. When not too firmly adherent it should be picked off, but when too adherent a poultice should be applied which will soften and cause to fall off in a few hours or a day. It is then washed with soap and water, dried and the pyrogalic acid ointment re-applied till the destruction has been deemed sufficient.

This remedy is used in the form of an ointment made up of

℞	Ac. Pyrogallic	ʒi
	Empl Resinæ	ʒi
	Arat. Resinæ	ʒi

After removal of the final slough a carbolized resin cerate may be used, and healing allowed to take place.

If after healing new foci re-appears in the scar tissue, the same method is resumed as before, usually for a shorter period.

An excellent searching caustic which has been extensively used is arsenic; its application is, however, painful and usually attended with a good deal of edema and swelling.

Not more than a square inch should be treated at a time to avoid the possibility of toxic effect from absorption. It is, therefore, adapted to a small patch of disease. It is applied one part of arsenicus acid to three or four parts of powdered acacia.

At the time of application enough water is added to make a stiff paste. This is spread thickly over the desired area and a piece of lint placed over it. The paste dries

both to the skin and to the lint, forming an adherent dressing.

At the end of 3 to 6 hours the application becomes painful and swelling ensues. After 48 hours poultices are applied till the plaster and slough come away. A perfectly clean ulcer results, which is subsequently treated as in the after treatment with pyrogallic acid.

It is to be employed in the form of an ointment, such as

℞ Acidi Arseniosi..... gr. xx.
Cinnabar Factit..... ℥i
Ung. aquæ osæ..... ℥i

It is kept constantly applied, changing it every day, and continued usually two or three days when sufficient destruction has resulted,

Arsenic has practically no action upon sound or scar tissue; it destroys only the dead tissue. To a less extent the same holds true with pyrogallic acid.

Probably the most common method here employed is that by the curette, followed by cauterization—caustic potash being applied immediately after the curretting is allowed to act for a few seconds or a minute, and dilute acetic acid is dabbed on to limit its further action.

The surface is then dressed with the mercurial plaster, already referred to, or with carbolized oil.

Another method of destruction is by means of the galvano-cautery. This is painful and the scaring is more liable to be keloidal and disfiguring. Another method sometimes employed is that by excision; this being only applicable when the diseased area is small and sharply defined; when the integument is loose and yielding.

There are other methods other than those just referred to, which would be equally promising if persisted in.

But I think for the average case, either the pyrogallic treatment, the arsenica paste method, and the curetting with supplementary cauterization, will be found to prove a fair degree of success.

Is Pneumonia a Specific Fever?

By W. P. Ivey, M. D., Lenoir, N. C.

Do I ask a pertinent question? A glance at the pathological history of pneumonia will answer. There are many questions in medicine about which there can be no dispute. Were I to ask this question in regard to variola, there could be but one answer. There are many more upon which there has been much discussion and successive changes of opinion. In this class belongs pneumonia. It is one of the very oldest of diseases and its pathological status, an inflammation of the lung, was early established. There was no question at all of the correctness of this view for a long time. About one hundred years ago there was a mere suggestion, that this view was erroneous and that pneumonia might be an infectious fever and not merely a local inflammatory trouble. Still the old original status was maintained practically without dissent, till within the last twenty-five years the idea of its specific nature has taken a a new start and is now one of the every day topics of medicine. Is pneumonia a local disease with constitutional symptoms or is it a constitutional disease with local manifestations? These are the questions, take your choice.

There are some in the medical profession, I am sorry to say, who have no idea at all of the pathology of pneumonia. They don't know and they don't care what it is pathologically. Their only thought is that it is a disease to be controlled. There are many others, who without study, still adhere to the old original pathological view, that it is a local inflammation of the lung and nothing more. There is a third class, bacteriologists and scientists, and it is agreed among this large class that pneumonia is a general specific fever as much so as measles or mumps or erysipelas. I do not propose in this paper to settle the question, to end the dispute. I am no bacteriologist, no extreme advocate of the germ theory of disease or special admirer of serum therapy. I am only a common, every day, country practitioner with nothing new to offer. I only wish to to express my emphatic opinion of the specific nature of the disease in question, to give some reasons "for the faith that is in me" and to deduce some corollaries.

First, I want to call attention to this fact, that the maintenance of health is only a question of "the survival of the fittest." As it requires capital to make capital and maintain a high standing in the financial world, so it requires a certain kind of constitution, a certain amount of vital force to fight off the ever present causes of disease and maintain a standard of health. The causes of disease in countless forms are ever present and with ingested food and inspired air are taken into our economy by the million every day. Not only are we menaced by causes from without, but our own bodies are busy laboratories, constantly evolving the most virulent poisons. The intestinal tube is a scene of constant war-fare, toxine and antitoxin striving for the mastery. It is the healthy man that successfully resists and maintains his stand-

ing. It is the man of lowered vitality, of a dyscrasia or cachexia that falls. The healthy man is not attractive to the microbe, whether introduced from without or manufactured within. They are not congenial companions and soon contrive to part company.

In dealing with specific diseases we are apt to forget the fact that the specific germ is not the only causative agent. While it must be present, there must of necessity be conditions necessary to its life and development. These in pneumonia may be a lowered vitality, a disturbance of the nervous forces or a peripheral irritation from cold, &c.

To prove certainly that pneumonia is a specific fever caused by the pneumococcus, the injection of this pneumococcus ought to cause the disease. There are many reasons why it should be considered of specific origin, but, if this one were available, there would be no use for any others and they would only be corroborative. But this proof is lacking except in animals. Different animals evince a different degree of susceptibility. Mice are peculiarly liable, guinæ pigs less so and fowls are immune. Some degree of traumatism at the point of inoculation is necessary, thereby causing the vital resistance of the lung to be weakened. Simple inhalation fails to produce pneumonia, because of the lack of this local traumatism. Chilling of the lung also predisposes to the causation of pneumonia in animals by injection. Chilling of the animal alone without the introduction of the pneumococcus fails to cause pneumonia. The serum treatment has been tried with some degree of success. The treatment by injection of the blood of convalescents is not difficult in animals and gives strong reason to believe that it will prove a specific for pneumonia. While the production of pneumonia by the injection of the pneumococcus in a human being would be proof positive of its specific nature, yet the inability to accomplish this result is by no means proof that it is not specific. The pneumococcus is not the only causative agent and the peculiar condition necessary for its effectiveness is not known and cannot be brought about just at the time of injection.

Pneumonia must be constitutional because it may attack other parts of the body, as the meninges of the brain. In a certain case of death from cerebro-spinal meningitis pneumococci were found in the brain and cultures of those found in the lungs were found to be very virulent. Pneumonia in the old and very young may have such pronounced brain symptoms that the disease may be overlooked.

It resembles many diseases that are positively known to be general. It is very much like erysipelas, the specific nature of which is now generally recognized. They begin the same way, last about the same time and each has a local manifestation. I have been in the habit of speaking of pneumonia and la grippe as double first cousins, because of their similarity, especially in the extraordinary weakness and general depression. The crisis of pneumonia is very much like that of spirillum fever. It resembles other acute infectious fevers in its distinct chill, orderly fever, typical course definite duration, cerebral symptoms, sweats, sudamina, the occurrence of certain complications with more or less regularity and the occurrence of abortion in pregnant women. It is sometimes a disease of intra uterine life. Local fevers do not occur in the fœtus, but specific fevers do.

Abortive attacks of pneumonia are occasionally seen and are in harmony with its infectious nature, as they are seen in other specific fevers, such as typhoid fever and scarlatina. In one epidemic of scarlet fever, in which there were over one hundred cases, in many the rash lasted only half a day. It is very probable that many cases of obscure illness in which there were high temperature for a day or two, some cough and the physical signs of hyperæmia of the lungs were cases of abortive pneumonia.

Other reasons which can only be mentioned are, asfollows:

1. It differs from other local inflammations in that it is self-limited and terminates by crisis.

2. Artificial means fail to produce lobar pneumonia, they produce the lobular variety.

3. Cold does not influence the prevalence of it. It increases bronchitis, but not pneumonia.

4. There is no relation between the amount of lung involved and the symptoms.

5. There is no second chill, when another lobe or other lung is invaded.

6. Its typical history, running a course so universally the same, makes it unreasonable that it should have more than one cause.

I reserve for the last, as one of the most convincing arguments of its being a general fever, its occurrence as an epidemic. It was this that most of all fastened conviction upon my mind and prompted the writing of this paper. Early in my practice it was my experience to pass through an epidemic of croupous pneumonia. It was not merely a time, when there was an unusual amount of pnenmonia, but it was a veritable epidemic, as much so as ever was

one of measles or mumps or scarlet fever. In a small area of country comprised within a radius of four miles, from the first of February till the first of June, I treated between sixty and seventy cases of pneumonia. In numbers of families there were more than one case and in one family there were as many as five. They all ran a remarkably even typical course, the crisis occurring in the great majority of cases on the seventh day. In one case it occurred on the fifth day and in another on the third. The treatment in the main was aconite and morphia. There were only four deaths, two being old people and one of these died of sudden heart failure while sitting up during convalescence. Ever since passing through this experience I've been firmly of the opinion, that pneumonia could be nothing else than a general disease and I am satisfied, that, if any of my readers are doubtful, they would be convinced were they to pass through the same.

But grant that this is its pathological standing, of what practical benefit, is it? Well, so far, none. Up to this date it is of scientific interest only. Let me, however, impress the following:

1. Don't foster the popular Fallacy, as many doctors do, that pneumonia is caused by cold, for it is not. It is caused by the pneumococcus of Friedlander, or the diplococcus of Frankel, or the micrococcus of Sternberg, as the case may be, and there is no harm done in letting the people know it.

2. Don't make a great splutter trying to abort it. Don't say to the patient "you've got pneumonia, but I think maybe I can break it up." True there are some abortive cases, but the doctor dont deserve any credit for them.

3. Exercise the same precautions and sanitary measures in treating pneumonia as you would in a case of typhoid fever or tubercular phthisis. No harm can be done and another case may be prevented.

4. Don't, please don't, talk about any body being threatened with pneumonia, for there is no such thing. There is nothing more tiresome than to read in the papers of such and such a person being threatened with pneumonia. One either has it or not and that is the end of it, might as well talk of one being threatened with smallpox or erysipelas.

Two Cases and Their Treatment.

By J. A. Reagan, M. D., Weaversville, N. C.

Captain. A. was taken early in the morning, and not being able to pass his water, sent for me as I had been his family physician for over 25 years; not being at home Doctor W. went. He was in such pain that some of the family sent for Doctor H., another sent for Doctor J., while the Captain ordered a third to get a fresh horse, and not come back without me. I was in an adjoining county to see a very sick man. I get to the Captains' about 4 o'clock P. M., and found the three physicians named present, and they had diagnosed the case as a clot of blood in the bladder. They had concluded after consulting that a fountain syringe would desolve it, if the water was as warm as he could bear it, but I told them that my opinion was different. That if the urine would not dissolve it, any water they could inject would fail. The fountain syringe was tried and accomplished nothing. They all left, and left the case in my hands. I had a tub filled with as warm water as he could bear—set him in it—cut a piece from the rubber tube of a Davidson syringe about two inches long, run it over a silver catheter, and fastened it; then ran the other end over a tube of another syringe. I expelled all the air under the water, as all his parts affected were in the water. I asked him to enter the catheter as far as he could, which he did while I threw the warm water as he moved the catheter. When he struck the clot of blood he said he could go no further. I then pushed the catherter through the clot, and then threw the water with good force, when the blood began to pour out by the side of the catheter. I kept this up until the water came clear. He then went to bed, and was asleep in a few minutes. He never had any more trouble in that way. The tub was set in the back porch, and the next morning Major B. who was with me from the beginning, and I had the water poured out and the clot of blood, as large as a pint boll was settled just as it came from him and the water, but little stained.

Second Case.—Mr. C. was taken with intus-susception. He sent for me, and after satisfiying myself as to the nature of the case, and using the things usually used in such cases, and failing. I sent for Drs. W. J. & B. when they came, I told them I did not sent for them for consultation, but to help me I told Drs. W. & B. I wanted them to raise his body to an angle of 450, and I wanted Doctor J. to work, or manipulate his bowels while I injected warm water to try and relieve his condition. They did so, and while his body was in this position, I injected not over a half gallon of water until he said stop, I did so, and then set him over a vessel, and he had a copious discharge from his bowels, and has never had a recurrence of this trouble when he was relieved, Doctor J. said, "I would not

take fifty dollars for that." We have in many cases to let our reasoning powers act, and not confine ourselves alone to books. If Jenner had done so, we never would have known the great benefit to mankind by vaccination, or Harvey in the circulation of the blood. Sims in the speculum. We ought to read all we can—keep well posted —fully up to the times, but, let reason and judgment act freely, so as to avoid error, and do things different from the old usage if cases requires it. Do not fear in this line if no danger can result from it.

Lumbago.†

By Francis Reder, M. D., Surgeon in the Relief Corps of the "Burlington Route," Headquarters at Hannibal, Mo.

The subject of this paper is not interesting. The affliction, when we come to consider it, is still less interesting.

To the practitioner who is consulted by a patient with a "pain in the back," no particular interest is manifested in the affection after the diagnosis of Lumbago is clearly established. But to the physician who is called upon to determine whether or not this "pain in the back" finds its origin in an idiopathic or a traumatic cause, a different interest commands the physician's closest attention.

In endeavoring to be decisive on this point, I have encountered many difficulties. It has so happened that I have been placed in a position for several years where a decisive opinion as to the nature of such a disability was expected of me. The unpleasantness arising out of my decisions prompted an interest in me to study these cases more closely.

A little over two years ago I commenced to keep a record of all cases of "pain in the back" coming under my care. My collection has so far aggressed to 78 typical cases, and from these cases I have obtained a knowledge that has aided me greatly in establishing a satisfactory classification.

In all these cases a urinary analysis completed the examination. The cause was ascribed either to "accident" or "sickness," irrespective of the history given. This was done because in a large number of cases the history was not clear, or too much so, it being to the advantage of many of these patients to have their disabilities appear as if caused by some accident.

These 78 cases comprise males only, their ages ranging from 16 to 60 years. Most of these men were in the employ of a Railroad Company.

We are prone to accept the affection commonly known by the name of Lumbago, as a pain possessing characteristic peculiarities, and finding its seat in the tissues of the lumbar region. Topographical anatomy pictures to us this region bounded superiorly by the last rib, inferiorly by the posterior crest of the ilium, and latterly by the posterior margin of the ext. oblique muscle. The row of spines of the 5 lumbar vertibræ divides this region into equal halves, the right and the left.

All the structures found in this region bear with some importance upon any disorder that may find its lodging here. They must be thoroughly understood, and must be taken fully into consideration in establishing a diagnosis, since a pain in the back may carry with itself a gravity of vital importance.

Beginning with the skin, we find it to be a tough and thick structure, limited both in mobility and sensibility, having a firm attachment to the spinous processes. Underlying the skin a cellular tissue, having a superficial and a deep lamina, the former intimately blended with the skin, the latter interlacing with an aponeurosis, is discernable. A structure of marked importance comes next. It is the lumbar aponeurosis, the strongest fibrous sheath in the body. It is this structure that moulds the shape to this region of the body by finding firm attachment to the vertebræ, and giving origin to and securing the erector spinæ muscles. This aponeurosis serves as an enveloping sheath to all the important lumbar muscles, principally the quadratus lumborum, the transverso spinales and the intertransversales. It assists in the formation of the numerous ligaments found in this region, thus imparting one of the strongest supports, and furthermore giving to this part of the body superior mechanical advantages.

The lumbar arteries are very liberal in their supply, while the nerves find an inviting field for distribution, especially the sympathetic system, which contents itself by sending branches from the renal, solar, hypogastric and lumbo-aortic plexuses.

The extent of this anatomical perusal, however, is not sufficient when we wish to thoroughly consider a disabled back. We will have to go a little further and see what visceral contents enter into the formation of this important region. There lie, for instance, immediately in front of the vertebræ, the pillars of the diaphragm. To the left of the spinal column we find the inferior vena cava, to the right tne aorta. One-third of the space in front of the quadratus

†Read at the April meeting of the Tri-State (Illinois, Iowa and Missouri) Medical Society at St. Louis, Mo.

on the left gives place to the lower half of the kidney, the other two-thirds of the space being taken up by the colon. On the right side, the kidney descends a little lower, owing to hepatic encroachment. The The colon in the right lumbar region is entirely invested with peritoneum, and on the left only partially so.

With this anatomical picture before us, we hope to be able to reason intelligibly with a painful back.

"Lumbago," commonly applied to a pain involving the soft structure of the lumbar region, may be caused by exposure to cold, or a draught when the skin is warm and perspiring, resulting in a diffused rheumatic neuritis and myositis, i. e., a rheumatic affection attacking the nerves, muscles, and aponeuroses. This condition is most frequently met with in patients who can assign no cause for the pain, but who found that on endeavoring to arise out of bed in the morning, they were unable to do so on account of a very acute and sharp pain in this particular region. If the diagnosis of Lumbago in such a case is plain, it becomes evident that at some time during the night the lumbar region of such a patient had become exposed. But the principal and most annoying cases of Lumbago met and with which we have to deal, are those caused by alleged mechanical injuries, most frequently some kind of indirect violence, not severe enough to cause any external evidence.

Injuries that are sufficiently violent to cause a lesion of the cord, or a fracture of the vertebra, I beg to exclude, as the external evidence in such a case is invariably present to a marked degree, the violence being of a direct nature.

A mechanical injury of an indirect nature to the lumbar spine can be inflicted in a manner as easy as it might be unexpected. For instance, the swaying of the body backwards and forwards, a sudden turn, the lifting or pushing of a weight, manipulation of an object overhead, in fact any muscular effort, no matter how mild, can, when the control of the muscular structures in the lumbar region has been momentarily lost, cause this painful condition.

The symptioms of a back disabled by such an injury, and one disabled by disease, are so analogous, that a differentiation between traumatism and idiopathism can be made with much difficulty, and then only when the history can be clearly obtained.

My research has influenced me to divide Lumbago into two kinds, thereby hoping to be able to establish at least to some extent a way by which such a disability might be judged as to its origin.

The first, the kind comprising the involvement of the muscular tissues.

The second, the kind comprising the involvement of the fibrous tissues.

These conditions, however, rarely exist separately for any length of time, the liability of the inflammation developed in the muscular or fibrous tissues being easily transmissible to one another. It must, therefore, be of great importance to reach an immediate conclusion in establishing the cause.

To the form in which the muscular tissues have suffered originally, the cause can most generally be attributed to an idiopathic nature, while the form in which the fibrous structures seem to have been the seat of primary invasion, a traumatic cause may be looked for.

In differentiating between the two kinds we find that the pain where the muscular tissues are involved is diffused, of a sharp and aching nature, unintermittent, and frequently involving both the right and left lumbar regions at the same time with uniform intensity. Moreover, it has a migratory tendency, and may alternately affect the right and left regions.

Pressure and percussion elicit a marked tenderness. In bending the body forward the muscles are not rigid, although there is some stiffness in the back. Rigidity seems to show itself when an attempt at motion is made. The patient is able to twist his spine from side to side, and can be bent backward to a considerable degree. These movements produce a certain amount of dull, aching pain, interspersed with a few sharp, cutting pains. This form is prone to frequent recurrence, recovery being slow and sluggish.

In the kind of Lumbago involving the fibrous tissues, i. e., the aponeuroses and ligaments, the pain is localized and of a severe and lancinating character. It is often found to be more intense on one side of the vertebral column than on the other. The seat of the pain is generally close to the vertebra. Pressure and percussion cause great aggravation of suffering. The bending of the body causes the muscles to become very rigid, giving a tumefied appearance to the part of the region affected.

Twisting of the spine from side to side, or bending, is almost impossible on account of the rigidly inflexible condition of the spine. This pain is of an intermittent nature, and is similar to the pain of any joint after a severe stretching of its ligamentous structures. In the lumbar spine distressingly so, owing to the imperfect joint formation, and the extensive fibrous tissue investment which may have become implicated. Recovery in this form is prompt and recurrence less frequent.

The clinical features of Lumbago present

nothing interesting. In the greater number of cases the symptoms are mostly subjective. In the more severe forms, however, where the attack is acute, where a neuro-mimetic condition is favored, we may have some febrile disturbance with a slight systemic impairment. The general condition of the patient is good and remains so throughout the attack.

In idiopathic forms of Lumbago the urine is generally of acid reaction, often showing an excess of urea and uric acid, with a normal specific gravity. At times a trace of albumen is present.

The prognosis is as good as the liability to recurrence is favorable.

In remarking briefly on the treatment of a "painful back," I beg to state that both forms, be the cause idiopathic or traumatic, yield alike to the same routine of treatment.

Palliative measures, with absolute rest, give the best results. Medication is of little value, though the salicylates and potash salts may be successfully employed in those cases where there is a predisposition to rheumatism. Ergot and Joborandi have been recommended by French authorities. I have failed to get their accredited results. With hot applications, galvanism, occasionally a hypodermic administration of morphia and atropia, and rest in bed, I have often been successful in aiding the subsidence of an attack within two and three weeks.

In presenting my summary of 78 cases of "painful backs," it has been found that in nine (9) cases the pain was caused by renal degeneration, (Bright's disease).

In two (2) cases it was found to be due to a lumbar abscess, (one perinephritic, and the other appendicitic).

In one case the diagnosis of renal calculus was made, in another that of incipient vertebral caries. This left us 65 cases of Lumbago. Forty-one cases out of the 65 gave a history of some kind of an injury. The cause for the remaining 24 being unknown. Out of the 41 alleged injuries, 14 could only be classed as accident, the remaining 27 cases were carried as sickness. This would go to show that out of 65 cases of Lumbago, with 41 histories of alleged injuries, 51 were found to be of an idiopathic, and 14 of a traumatic nature.

A Personal Experience in the Climatic Treatment of Pulmonary Disease.†

By Wm. J. Schuyler, M. D., Utica, N. Y.

On the 23d of September, 1896, the writer of this paper returned from a week's stay in the adirondacks suffering from a well marked case of epidemic influenza of the catarrhal type. There wsa lassitude and loss of appetite, the invasion being accompanied by rigors, muscular pains, elevation of temperature, and a short, dry cough with embarrassed respiration, all going to show a systemic infection with the miasm or germ of this troublesome disorder. On arrival home the temperature was found to be 103 degrees F and with it extreme physical prostration and total loss of appetite.

The weather during the week spent in the woods had been most unfavorable for out of door life; hard rains had been of almost daily occurrence and the whole forest region had become thoroughly damp. By the residents of the country it was designated the line storm or equinoctial and it certainly seemed to be characterized by all the disagreeable features of that disagreeable season.

The local lung condition was found on examination to be that of capillary bronchitis, quite confined to the right side and in the lower lateral and posterior part of the chest. Rest in bed with appropriate remedies was advised and faithfully carried out, and at the end of a week the local symptoms had largely disappeared; cough had subsided; appetite had begun to improve and convalescence seemed assured, the temperature returning to the normal. It was noticed, however, that a tendency to cough on becoming fatigued, together with considerable physical weakness, still persisted.

After three or four days spent more or less in the open air, there was an abrupt return of all the chest symptoms, including cough and moderate dyspnœa, with rise in temperature. The course of the disease from this time on was somewhat peculiar. The nights were fairly comfortable and a reasonable amount of sleep was obtained without recourse to drugs. On awaking in the morning the temperature would show but a degree or two elevation above the normal. Between 8 and 9 o'clock however a severe paroxysm of coughing would develop, lasting for two or three hours, during the early part of which there would be a free expectoration of a rather thick yellowish muco-purulent material. On only one or two occasions was this stained with blood and then but slightly. Following the churning up of this purulent matter, a sensation of chilliness would gradually develop, accompanied by a rise in temperature to 103 degrees or 103¼ degrees F. which would continue for the remainder of the day. There was no marked tendency to profuse sweating and at no time was there any chest pains, except the muscular soreness resulting from the severe efforts in

†Read before the Annual Meeting of the Oneida County Medical Society held at Utica, N. Y., April 13th, 1897.

coughing. Physical weakness was pronounced during this time, and although there was complete anorexia a reasonable amount of liquid food could be readily taken and retained.

Physical examination of the chest showed an area of consolidation over the lateral and posterior portion of the base of the right lung, a limiting of chest expansion, loss of normal vesicular murmur, and moist rales over the affected lung tissue. A microscopic examination of the sputum revealed the streptococcus in abundance together with the micrococcus tetragenus. Evidently there was an acute inflammatory process taking place and accompanied by extensive purulent infiltration of that portion of the lung involved. This condition continued for ten days or more, when the acute inflammatory symptoms began to abate. The temperature would invariably be found normal or a little subnormal in the morning and the appetite began to show slight signs of returning. During the forenoon, however, the temperature would gradually go up to 101 degrees or 101½ degrees F. and the cough and expectoration continued. There was consciousness of slight dyspnœa at all times and this symptom become most pronounced on the slightest muscular exertion or even in talking. A little gain was gradually made in general strength but without any apparent improvement in the local chest symptoms. Expectoration continued practically unchanged in character and amount, and a gloomy prognosis was ventured by one or two of the physicians who had made an examination of the lung.

During the succeeding two weeks there was little if any indication that resolution was beginning or likely to take place, and a complete change of climate was strongly advised. After careful consideration a trip to the mountain region of western North Carolina was determined upon and on November 4th, attended by a friend, a start was made, the objective point being the little town of Brevard, N. C., located about 30 miles south of Asheville. The journey was made in easy installments, traveling by day and stopping at convenient places along the route at night. Brevard was reached about the middle of November, several days having been spent at Lakewood, N. J., Washington, D. C., and Asheville, N. C., on the way. The journey, taken altogether was very well borne.

The reason for going to this particular place was partly on account of the excellent reports of its climatic advantages through a friend of the writer who had spent some time there, and partly because it was thought to be a locality in which there was little chance of infecting a diseased lung, with a germ which might eventually lead to even more serious results than those already experienced. A place like Asheville, which for years has been crowded with tubercular patients was looked upon as a place to shun under the existing circumstances.

Brevard is a small village of about 500 inhabitants and is the county town of Transylvania County. It is charmingly located on the summit of a low spur or ridge which crosses the upper valley of the French Broad River at this point, the valley varying in width from about 2½ to 4 miles. It is a beautiful and fertile mountain valley, protected on all sides by low mountain peaks and having an elevation of 2250 feet above sea level at the point in question. The soil of the ridge on which the town is located is a rich, reddish colored clay loam which is found on analysis to contain a large percentage of sand. It is an extremely porous formation with an underlying strata of gravel. Along the bottom lands of the valley, the soil is of a rich, almost black appearance and evidently the result of many years of washing from the neighboring mountain sides and the upper part of the valley. The valley itself is virtually formed by the near approach of the Blue Ridge and Appalachian system of mountain ranges which at this point almost form a juncture. To the northwest is the celebrated Balsam Range with its dense covering of pine and fir.

The mean temperature of Brevard from May to October is 65 degrees F. with an average maximum of 75 degrees. From October to May 49 degrees F. with an average maximum of 60 degrees. With few exceptions, the temperature rises during the winter months to 50 degrees F. and often in sheltered places reaches 70 and 80 degrees. The average yearly rainfall is about 40 inches, but there is no stagnant water or marshes and any excess of moisture disappears very rapidly. The air is unusually rich in ozone, varying from 50% to 75% on a basis of a possible 100%. The natural drainage of the town is excellent; mountain streams are numerous and the supply of pure water is abundant.

In giving these statistics I quote freely from a most admirable brochure entitled, "Remarks upon the climate of Brevard, N. C., as an Ideal Health Resort" from the pen of Dr. Charles W. Hunt, a resident physician of the town who has made careful investigation of the question, and to whom I am indebted for many courtesies and for excellent advice during my stay in North Carolina. Dr. Hunt, who has been located in Brevard for the past twelve years, relates many interesting examples of the

beneficial influences of this really wonderful climate, not only in pulmonary diseases, but also in nervous affections, notably the neurasthenias, in insomnia, the various forms of dyspepsia and in the tardy convalescence which so often follows many of the exhausting diseases, both acute and chronic.

The curative influence of this climate has been especially noticeable in children and young people, who by inheritance, or natural physical weakness are so likely to fall victims of pulmonary disease. In these cases by increasing the constitutional strength of the young subjects, the predisposition to disease seems to be removed, and the system enabled to outgrow the inherited tendency.

The air of this mountain region is wonderfully tonic and invigorating at all seasons and is quite unlike many localities in the South where the warm climate is distinctly enervating. The extreme humidity with which we are all so familiar here in Central New York and which relaxes to a painful degree ones whole anatomical mechanism, is entirely wanting in this elevated mountain valley. Out of door exercise is not only not a drudge, but a positive pleasure, and long walks or horseback rides never becomes a bore. Ones whole system almost immediately feels the tonic influence of this ozone laden air and appetite and general nutrition improve rapidly. Sound refreshing sleep is almost sure to come after a day spent in the open air in this climate and with returning physical strength there is corresponding improvement in local symptoms if any exist.

There are many points of interest within a few hours journey that may be visited among the mountains and good quail shooting and trout fishing may be found in season by those who are fond of this sort of pastime. In fact there is every inducement to keep one out of doors, and scarcely a day passes that the sun does not shine, for several hours at least. This whole territory is noted for the great number of bright, sunshiny days and even in winter, the weather is of such character as to make an overcoat almost superfluous. A general feeling of buoyancy and hopefulness soon take the place of morbid depression and despondency. Normal nerve function soon becomes established and bodily nutrition is carried to its highest point.

In my own case, an examination by Dr. Hunt the day after arrival showed a practically unchanged condition of chest symptoms. Little if any air entered the diseased area; there was extreme dyspnœa on slight exertion and the noon and evening temperature averaged 101 degrees or 101½ degrees F. with continuance of cough and expectoration. Appropriate remedies were ordered and moderate exercise in the open air as the strength permitted was advised. At first a quarter mile walk was all that could be taken with comfort, but within a week this could be easily increased to two and a half or three miles without undue fatigue. Increase in strength and appetite came rapidly, dyspnœa grew correspondingly less and the cough and expectoration gradually subsided. The temperature at the end of the ten days scarcely reached 100 degrees and by the end of the third week had entirely disappeared. A gain of five pounds in weight was made in the first two weeks and at the end of four weeks a long, hard, all days tramp, with a half hours rest at noon, was indulged in without unusual fatigue.

In view of the character of the local lung condition and the extreme physical prostration accompanying it, this rapid improvement in all directions seemed to the writer to be a matter of unusual importance and interest, not only to the individual thus happily restored, but to others who may have the misfortune to encounter a similar wrenching of their pulmonary anatomy, or to those of our profession who may have under their care, persons suffering from some physical or nervous ailment, over which proper climatic treatment may exert a favorable influence. If taken early in its development, I feel confident that many cases of pulmonary tuberculosis would give way to this most invigorating atmosphere.

Another item of importance, which should be noted before leaving this topic, is the fact that this climate is one which you can safely go away from. There is no embarrassment of respiration or circulation, noticed in many of the higher altitudes, and on arrival in Utica with a temperature at zero or below, no especial discomfort was experienced.

The one thing lacking so far as Brevard is concerned, is a well equipped hotel or sanitarium, where, at moderate rates, patients could be comfortably cared for, and provided with some of the luxuries that these sufferers so often demand and need. As it is, good board and pleasant sunny rooms can be readily obtained in private families, and the village hotel is a comfortable, first-class house of its kind and free from objectionable features.

Reports from two cases of pulmonary disease who have gone to Brevard since the writer's return, are most encouraging, one being a case of interstitial change and the other of the ordinary tubercular type. Another, a case of so-called stone-cutters phthisis that has come to the writers knowl

edge is also reported as showing marked local and general improvement.

Another point which I believe should be emphasized in this connection is, that the Adirondack region, at certain periods during the spring and autumn months is not always the best place for persons suffering from bronchial or pulmonary weakness. Some of the most virulent types of epidemic influenza, with pronounced tendency to lung complications have been contracted by people staying in this very locality. This whole territory at such times seems to become thoroughly water-logged, and while the preservation of the north woods is undoubtedly a matter of great importance on this very account, it certainly cannot be said to add to its merit as a health resort.

In conclusion I wish to express a deep sense of gratitude to several members of this society for kindly interest and advice cheerfully rendered during a most trying sickness, and to express the hope that if any member is ever in like manner afflicted, he may have the good fortune to find as complete and successful a remedy as did the writer.

Medicinal and Dietetic Treatment of Typhoid Fever.†

By William S. Ely, M. D., Rochester, N. Y.

The preceding papers are of great value in giving us much information concerning the causes and prevention of typhoid fever, but who can tell us anything new about its treatment? Every physician of experience knows, or thinks he knows, how to treat typhoid fever. The majority of his cases have recovered, and friends and patients laud his skill.

When I commenced practice, nauseous fever mixtures, turpentine and quinine, whiskey and brandy, with close air, an abstinence from water, and disregard of diet, constituted the approved method of treatment of the disease under consideration. Even then the majority of the patients survived.

The profession was slow in discarding a system of medication taught in the text-books and, ex cathedra, in the medical schools, and I still remember wondering whether it would be safe to omit turpentine internally for a dry tongue, or externally for a swollen abdomen. Medicina "non facit saltum" has been true of our therapeutic progress. It has been by slow degrees that we have become convinced that the function of the physician in the management of self-limited disease is to modify symptoms which he cannot arrest, and to guide the patient safely to the haven of health, as a skilful captain steers his ship across the sea.

The discovery of the bacterial origin of typhoid fever has stimulated the study of its management, in the expectation that by the destruction or neutralization of a specific germ its deleterious influences may be arrested or modified. While this is our hope and aim, and may be confidently anticipated in the future, we are not yet in a position to declare it "un fait accompli." The strong hopes of aborting tyyhoid fever by the "Woodbridge treatment" have not been realized in the experience of many of those most anxious to establish its value. It is but just to Dr. Woodbridge to say, that he deems the failure to obtain his flattering results to be due to an incomplete comprehension of his elaborate method. Hence, his treatment should be accorded further trial.

When the little square boxes of coal-tar derivatives came to us from across the sea, with such wonderful endorsements of their ready acceptability to the palate and stomach, and of their harmless antipyretic effects, how these products were thrust upon our patients, and with what delight we saw the mercury in our fever thermometers tumble! It now seems singular that it took us so long to measure the harmful reaction of these remedies, in the form of nervous depression and heart failure. I do not question the potency of these agents, but I desire to emphasize the belief that they must be used in smaller doses than formerly, and that their effects must be closely studied.

It appears demonstrated that the diarrhœa of typhoid fever is a salutary influence carrying off noxious bacteria, and lessening the septic infection which they seem to favor. Therefore, the laxative usually given early in the disease may often be continued, with good effect, in the form of a saline.

There is reason to question whether the so-called "fever mixtures" do sufficient good to compensate for their disturbing influence upon digestive processes. Nor is there any agreement in favor of guaiacols salol, carbolic acid and iodine, chlorine water, and so many other vaunted remedies that might be named. They serve to satisfy the friends of patients that something is being done, but I am led to question their real efficacy. Why should I argue for their potency, when I know that the speaker who follows will throw cold water upon them all? He will show that the external and internal use of water are the best anti-

†Read at the Meeting of the Medical Society of the State of New York at Albany, January 27, 1897 in a Discussion on Typhoid Fever.

pyretics yet known. We are then left, in ordinary uncomplicated cases, to place our main dependence upon hygienic conditions and dietetic treatment. Whatever else may be required, fresh air and pure water must be abundantly supplied.

I usually aim to place a typhoid fever patient between two open windows, and the fear of taking cold is a bogey to be expelled from the minds of the patient and his friends. Whenever possible, two single iron beds should be supplied, the bedding of the one not in use being left in the open air for from four to six hours daily.

The bed-pan often excoriates the sacrum. I have seen terrible bedsores, compromising the life of the patient, follow its use. Hundreds of times, in single cases, this instrument of torture is shoved under emaciated hips, and the skilful nurse must feel for the helpless patient, who soon becomes oblivious to its employment. She has learned to cover the bed-pan with pads of cotton wadding, to be burned after use, and she changes the position of her patient almost hourly from side to back, and from back to alternate side, upon the softest bed she can construct. Thus, the discredit of an extensive bedsore, or great praise for preventing the occurrence of the same, may be due to the nurse. She will remember that there is danger wherever there is prolonged pressure, not alone in the region of the hips, but also about the shoulders, elbows and ears. If bad cases, with brain symptoms, when the patient's eyes are fixed and open the nurse will frequently move the eyelids over the cornæ, to prevent dryness and ulceration of the same.

We do not give internal remedies to moisten the dry tongue of a mouth-breathing typhoid fever patient, or to lessen the sordes upon his teeth; but we expect the nurse to modify these conditions by frequent cleansing and soothing lotions.

In intestinal hemorrhage, often followed by a sudden fall in temperature, we note a condition always serious, and occasionally fatal. It may be treated by five-grain doses of alum largely diluted with water, frequently repeated, by ice upon the abdomen, and by stimulants p. r. n. When there are the pain, shock and collapse, which may indicate intestinal perforation, the skilful surgeon must be called in consultation, and the question of immediate laparotomy is to be decided.

I believe there have been, and will continue to be, cases of typhoid fever, due to an intense septic influence, which will prove fatal under any treatment known at present. They are like septic diphtheria, septic scarlaytina, septic pneumonia, and other septic states of the system, in which the poison of the disease is so excessive in amount as to paralyze hopelessly the nerous system.

Stimulants have been used injudiciously in typhoid fever. I am always distrustful of the result in a case which cannot survive the first week without stimulants. Defer them until the second or third week of the disease, or later. They are a powerful agent in reserve for the exhaustion of pyrexia, and for the depressing influence of the fever poison upon the digestive and nervous systems. Begin with camphor water in half-ounce doses, every two or three hours, and lead up to the milder alcoholic stimulants, as sherry or red wine, with whiskey or brandy to fall back upon. The use of all should be determined by the effect upon the pulse, temperature, respiration and nervous condition. Strychnine is of great value in many cases, and may be given for days in frequent doses, providing you have a competent nurse to watch for its cumulative effect.

As to dietetic treatment, the profession is now generally agreed that liquid food is nearly always preferable, and that in the average case there is no substitute for milk in some form—plain, boiled, peptonized, with lime water or soda, according to the indications. Two quarts a day is a minimum amount for the average case. My patients have not been disturbed by its regular administration by night as well as by day. Indeed, I never make any difference between night and day in the management of serious cases of typhoid fever. Rebellious stomachs, as in some other diseases, are to be managed rather than medicated. An amount of milk given every three hours and rejected can be given in divided portions every hour, or half hour, and be retained. I once saved a paitent's life by slipping one half-ounce of nourishment ihto the stomach every fifteen minutes—ninety-six times each twenty-four hours—for several days. Large amounts at longer intervals invariably caused vomiting. As neruovs force is rapidly consumed by persistent high temperature, its duration must determine the amount of food given. Milk may often be supplemented by beef juice and eggs. In exceptional cases where exhaustion has been marked, I have given twenty whole eggs, or the whites of forty eggs, every twenty-hours, with benefit.

What is needed is judgment in conserving the vital forces of the patient and in treating complications as they arise. Statistics of medication are valueless, unless the type of the disease be considered. Age, constitution, habits, previous history, climate and local surroundings, necessarily modify treatment and its result. The distance is antipodal between ambulating ty-

phoid fever and the profound septic case, which paralyzes the whole system long before the disease can reach the midocean of its course. Judgment, I say, is required to generalize the disease, and to individualize the patient, to measure accurately the conserving and destroying forces, from visit to visit, and to adjust the management of each case by the indications thus obtained. Non nocere should be our motto.

Do these views savor of nihilism in the therapeutics of typhoid fever? I reply that where there is no agreement whatever among physicians in the use of numerous remedies in a self-limited disease, it may well be asked whether they have an unquestioned value.

But, in conclusion, if I underrate mere medicinal agents, I cannot exaggerate the importance of hygienic and dietetic measures. In the truest sense we cure our patients by caring for them. They are often helpless, indeed, lapsing into the oblivion of infancy, and are wholly at our mercy. Are we not criminally negligent if we do not give them our most intelligent care? Until we have learned successfully to abort the disease, or have found an antitoxin for it, I repeat, that we must depend mainly upon hygienic and dietetic measures, with the free use of water externally and internally, and the guarded employment of those medicinal agents which have proven most trustworthy in the physician's individual experience.

I have been satisfied with the results obtained in my practice from the application of these principles. And it is principles of treatment rather than specific medication, that I have aimed to suggest in a necessarily limited abstract. I should deem it presumptuous to do more than this.

Lastly, let me emphasize the great importance of the aid rendered by an intelligent trained nurse, in every serious case of typhoid fever which we are called to treat.

78 South Fitzhugh Street.

Prolapse of the Cord. †

By A. D. Wilkinson, M. D., Lincoln, Neb.

The umbilical cord is said to present when, the membranes being unruptured, it is felt along with the presenting part of the foetus; but if after the rupturing of the membranes it decends into the vagina the condition is called prolapse, and distinguished as complete if the cord protrudes from the vigina. It is well to note the distinction in the terms, for as long as there is merely a presentation present our chief concern should be to adopt precautionary methods in order to avoid rupturing the membranes and prevent its becoming a prolapse.

The practical obtetrician as well as the scientific accoucheur has always regarded prolapse of the umbilical cord as a serious complication in labor on account of the great danger to the child, from pressure and the consequent liability to arrest of circulation. The mother escapes danger but the mortality of the foetus is frightful. However, it is a very fortunate circumstance that this condition does not happen frequently for according to English authorities it occurs in that country only once in 232½ cases. In France one in 373, whilst in Germany once in 162 2-3 cases.

It seems that country, climate and class of population exert an influence in the direction of frequency. The highest per cent perhaps is that given by Michaelis at the lying-in institution at Kiel, which is supplied from a country where the rachitic pelvis abounds, produced one in 90, whilst the great Bovin finds but one prolapse in 521 cases—all of these calculations are based upon the relative frequency in lying-in-institutions.

Engelmann says prolapse is much more rare in this country as well as among the the higher classes—the better housed and fed abroad—where disease deforming the pelvis is rare; his investigations at the lying-in-hospital at Vienna beyond a doubt establishes the theory that pelvic deformity is the most frequent cause for this accident and possibly next, the great amount of liquor amnii; data given by Engelmann and others show that the unnatural positions or presentations of the foetus are more liable to this complication than the natural, for it rarely accompanies vertex presentation but is frequently found with face presentations which in turn is chiefly caused by a deformed pelvis. The breech is rarely complicated with prolapse; tranverse positions and shoulder presentations much more commonly, and foot presentations oftener than any other.

The placenta if unnaturally located favors prolapse. Most authorities seem to think that it brings the insertion of the cord so much nearer the os. Engelmann asserts it is the passive, mechanical action of the large, though yielding mass of the placenta in preventing the normal course of the presenting part through the pelvic canal, and in making the close adaption of the lower segment of the uterus to the foetel head impossible, this is of course largely

†Read before the Missouri Valley Medical Society, March 18, 1897.

theoretical, yet it is a very interesting thought.

Another cause that is usually given in these cases is a long cord, but whilst the average length of the cord is greater than ordinary, a short funis is by no means a contra-indication and an uncommonly long one of itself will not cause prolapse. It must have some of the other indications present. The accident of premature or early rupturing of the membranes is not without weight in its tendency to prolapse as has also the shape and position of the womb, and these may be only secondary to a deformed pelvis. Twin pregnancy, hydramnios and premature labor come in for their share.

There should not be very much difficulty in recognizing a prolapsed cord, but some sad experiences have fallen to the lot of eminent and well qualified men. Dr. Tyler Smith in his annual address as President of the Obstetrical Society of London, relalates an instance where a midwife attended a patient, a very poor woman, during her labor, and she admitted having given ergot before the birth of the child. Mr. Robinson was called at midnight to remove a retained placenta, going as a matter of charity. On examining, he found what seemed a loup of funis in the vagina; passing his hand along it, and through what he thought was the os uteri, he felt a mass of about the size of the placenta which he drew down. Finding some difficulty he divided the supposed funis in two places, and then found to his horror that he had been dealing with intestine. At the post-mortem and inquest it was shown that a laceration existed at the upper part of the vagina, through which the bowel had passed and the placenta was still in utero, with the funis broken off short.

'Tis a fact that presentation of a cord is more difficult to make out than prolapse, yet there is a feel unlike any other part of the child. It differs from the touch of a coil of intestine in having a distinct pulsation which is not synchronous with tha mother's pulse. Whilst this is true, always have in mind the fate of Mr. Robinson. The only possibility of making a mistake would be, if the presenting cord had ceased to pulsate and the os, but slightly dilated. In such cases wait or secure more perfect dilitation; Winckel in a clever manner calls attention to the fact that if in ausculating the foetal heart, the sounds become lower, there is probably pressure upon the cord and an examination may lead to discovery of prolapse of the cord.

With the possible exception of hemorrhage, the result of accidental shortening of the cord causing a detachment of the placenta, there is comparatively no danger to the mother in these cases.

Still the manipulations incident to reposition, version and forceps extraction are not to be looked upon as entirely harmless procedures. The danger to the child however, is very great, and we would be safe in saying the mortality is not less than 40 per cent. Mauriceau, who by the way was the first to describe prolapse of the cord, claimed that the death of the child in these cases was because of the coagulation of blood by reason of the cold which it takes by the coming forth of the naval string.

In the treatment of Prolapse of the Cord it is most certainly the first duty of the physician to ascertain if the child be alive, and in the event that pulsation in the cord has ceased we need not interfere in the matter. for the mere prolapse if not considered a complication and does not endanger the welfare of the mother. We should be guided in our treatment by the circumstances of the case, the stage of labor, condition of the pelvis and uterus, by the position and uterus, by the position which the presenting part occupies, and the cause which had brought about the prolapse. If the case be seen early, the treatmentby position should be tried, especially if the membranes have been ruptured, and if conditions are favorable and the patient can be induced to control herself—place the patient upon the side opposite to that in which the funis has prolapsed to such an extent as to influence gravity in child and womb. Should it prolapse in one or the other of the sacro-iliac fossae seek relief in the knee chest position, which by the way has bothered several good men as to the right of priority in this procedure,

Dr. Papin of St. Louis, in January 1864, used this method in a case and claims priority. Credit has been given Dr. Thomas of New York, who, in 1858, wrote an elegant paper in the New York Journal of Medicine warmly advocating postural treatment, but we find this plan was taught by the late Dr. Bloxam when Robert Barnes was house surgeon under him at Queen Adelaide's Lying-in-Hospital about 1845. This postural treatment can be used in conjunction with the reposition of the cord efforts which is justifiable in many cases, by some is thought to be the treatment, whilst in fact with very few exceptions it should be confined to cases of prolapse with head presentation. Various instruments have been devised. The simplest and best, we think is the catheter and tape, but the hand is probably the best and safest. Hick's method should be recommended. If you fail with manual reposition podalic exertion is the best plan. Engelmann says version

is comparatively the most successful of all operations and should be more resorted to when any choice of method is given, as in head presentations. But whatever course be determined upon it must be borne in mind that the success of all operations by which we seek the presentation of the child whose life is threatened by compression of the prolapsed cord is in a measure dependent upon the judicious use of chloroform, its application to full surgical anesthesia.

28 Burr Block.

Contributions to the History of Medicine.

Medicine of Ancient Egypt.

By Franklin Staples, M. D., Winona, Minn.

Where and When Medicine Began.

Next to the care for food, clothing and shelter, the cure of physical injuries takes precedence among savage people, and later comes a knowledge of disease and its treatment. The history that has come to us of what existed in very early times has been dependent upon the means and opportunities of communication and the character and permanence of records. The earliest records of what pertains to the medicine of antiquity have been best preserved in the land of the Nile and the Pyramids. The time of the beginning of civilization in ancient Egypt is unknown, and much of the chronology of events in the early centuries is uncertain. The time of Menes, the first of the Pharoahs, who is said to have changed the course of the Nile and to have founded the ancient city of Memphis, is variously given from about 2700 B. C. to times much more remote. A great population and organized government must have existed in the country centuries before the time of this king. Time in Egypt was reckoned in dynasties. From the time of Menes the founder, to Cambyses, the Persian conqueror, (527 B. C.) there were twenty-six dynasties of Pharaohs or kings, covering a period of over 2000 years.

The character of much that existed in very early times is shown in what remains of the ruins of ancient cities and extensive works. The enduring monuments, the vast ruins and the tombs of this ancient land have preserved the records of a civilization and a people.

The origin of the original inhabitants of Egypt has been a matter of conjecture. They have been regarded as the descendants of Ham, the son of Noah, but in language they would seem to be of Semitic origin. Again, a theory has been that the progenitors of the ancient Egyptians came into the south-east of Africa from a land supposed to exist in fabulous times, but long since submerged by the ocean, and thence to have found their way first into Upper Egypt. This may be wholly imaginary and fabulous.

Character and Slow Progress of Medicine.

Egyptian medicine was partly theurgic and partly material or natural. The divinities in the mythology of ancient Egypt were many, being the personification of different functions both spiritual and material. The first great divinities were Isis and Osiris. Isis was the wife and sister of Osiris, and the goddess of fecundity, and had control of life and death. Wife and sister in one was permitted among the Egyptians but not among the Jews. Tradition has it, that Isis restored to life her son Horus. The power of raising the dead to life in mythological times was given as a mark of divinity, and is mentioned as such in early history.

Many divinities of different ranks were accredited with the care of life and the cure of disease. One of these was Imhotep, whose temple was at Memphis. Priests and rulers who had distinguished themselves were worshiped as divinities after their death. Imhotep (physician) was the name given to king Athotis, who reigned in Egypt perhaps in the fourth millennium B. C. Imhotep was to the Egyptians what Æsculapius was to the Greeks. The forms of certain animals were made in sculpture to represent deities, and these animals were regarded as sacred. Pacht, represented with the head of a cat, was the deity of childbirth. Thoth (Thuti), represented sometimes with the head of an ibis and sometimes with that of a dog, was regarded as the inventor of art and especially of the healing art.

From this ancient custom of deifying men and animals and of worshiping their forms, originated the so-called Greek and Roman medical sambolism. The Israelites learned of the Egyptians to make the golden calf. What became the Æsculapian serpent coiled around a staff and worshiped in the shrines in ancient Greece, is mentioned in the Old Testament, (Num. xxi; 8, 9) where Moses is directed to make the image of the serpent, and to put it upon a pole, that the people at the sight of it might be cured of the plague of the serpent bite. Aside from the demoniac theory of disease in this, we have a suggestion of the ancient doctrine of similars. These emblems of the union of ancient theology and art have come to us in the trade-marks of medical publishers and on the badges of medical societies

today. A part of the sacred Hermetic books (Hermes was the Greek name for the Egyptian Thoth) were six books of medicine, the "Ambre." The directions here given were authoritative, and any deviation from the same was at the risk of punishment to the physician. The "Totenbuch," (Book of the dead) is mentioned as also one of the Hermetic books, a sort of guide-book or talisman, the possession of which would secure a safe passage in the other world.

The priests of Ancient Egypt who practiced by magic, charms and prayers in the temples were regarded as physicians of the higher class. The lower class of practitioners, such as practiced at least partly by natural means, the Pastophori, so-called, were also a priestly order; were called Pastophori (*pastos phoras*), because in the ceremonies of the temples their duty was to bear the pastos, the sacred shawl. The exact position of the pastophori as physicians has been a matter of question.

Different estimates have naturally been made as to the character and value of early Egyptian medicine. One writer has said: "From the most ancient testimonies, sacred and secular, Egypt, from whatever cause, though perhaps from necessity, was foremost among the nations in the most human of studies purely physical. Egypt was the earliest home of medical and other skill for the region of the Mediterranean basin, and every Egyptian mummy of the more expensive and elaborate sort involved a process of anatomy." Dr. Edward Berdoe quotes Dr. Granville as follows: "There is not a single form of bandage known to modern surgery, of which far better and cleverer examples are not seen in the swathings of Egyptian mummies. The strips of linen are found without one single joint, extending to 100 yards in length," and adds: "It is said that there is not a fracture known to modern surgery which could not have been successfully treated by the priest physicians of ancient Egypt."

The fact that the early Egyptians understood the art of embalming does not itself show the possession of any considerable knowledge of anatomy. The Egyptians held that the welfare of the soul after death depended upon the preservation of the body; hence the interest and care in embalming the dead. Dissection of the body was prohibited, and such was the sentiment in regard to inflicting any wound or injury to the body, that the embalmers were compelled to allow a special person to make the incision for removing the contents of the abdomen and thorax; who having done this part hastily, was obliged to make his escape followed by stones and missiles thrown by friends of the deceased. As opposed to this, Pliny has been quoted as stating, that in the process of embalming certain examinations were made which enabled the embalmers to study the disease which had caused the death. This would appear to be a beginning of the study of pathology. There may have been truth in each of these representations, as applying to the state of things in different periods in the centuries of prehistoric medicine in ancient Egypt. Changes in customs and people were slow to take place, but in long time were brought about, some for the better others for the worse. To show, however, that progress was really made in prehistoric times in Egypt, the English writer, Dr. Withington, has this concerning times and changes: "It used to be thought that Egypt for some mysterious reason, stood still for forty centuries, and that it made little difference to an ancient Egyptian whether he was born 4000 or 400 years B. C.; but we now know that the nation underwent many changes, social and intellectual no less than political, during this vast period. Had that ancient (Egyptian) practitioner, Sekhet 'enanch, (B. C. 3533?) returned to life in the days of Moses, he would have found his language scarcely understood, his dress worn only by statues of the gods and Pharaohs, and the state of society entirely altered. What changes he would have noticed in his own art, we unfortunately do not know; though, in all probability, medicine had already assumed a more formal and priestly character."

The question of the lack or slowness of progress through long periods in ancient Egypt has been variously discussed. Aside from the want of knowledge in very early times on which to found a surely progressive science, there was a fixedness in laws and customs that rendered advancement nearly impossible. Like the laws of the Medes and Persians the practice of what pertained to the healing art was unalterable.

The predominance of the priesthood is given as the chief cause of the want of progress in Egyptian medicine, and is explained in this wise. The priests had control of what was then the art of medicine. Deified priests and rulers were the gods worshiped in the temples. The laws were regarded as commands of the gods, and were unchangeable. The directions and prescriptions of the sacred books were inviolable. No physician might deviate from the course prescribed except at his peril. While other things pertaining to the lives and character of this ancient people had their part in preventing change and progress, the subjection of art and science to the theology of the age was without

doubt the important and controlling condition. Theurgic medicine or the demoniac theory of disease and cure has been tenacious of life in all ages. In certain forms it lives in civilized England and America at the present time. The following concerns the present civilization in Turkey: Selam Aleikam, the chief magistrate of Damascus was asked not long ago to furnish vital statistics of his city to the French government. Blanks were furnished with questions as follows: 1. What is the death rate of your city? The answer was: "In Damascus every one must die at the command of Allah. Some die young, some die old, but every one must die." 2. "What is the rate of births?" Answer; "I cannot anwer this question. Allah knows all that." 3. "How is the supply of drinking water?" Answer; "Since time immemorial nobody died of want of water in the city of Damascus." 4 and 5. "How much goods are imported and exported?" Answer; "I never cared of my neighbor's business, and I cannot say how many camel-loads are brought to or sent from Damascus." 6. Concerning general sanitary condition, the learned magistrate's answer was: "Since Allah has sent his prophet, Mohammed, into this world with fire and sword, things are better." This item of intelligence is given as illustrative.

SOURCE OF KNOWLEDGE. MONUMENTAL HISTORY.

The sources of our knowledge concerning Egyptian medicine and what pertained thereto from the earliest times to about 600 years before the beginning of the Christian era, are from what has endured the ravages of time mostly in the tombs and on the remaining monuments of this ancient land. The vast pyramids, the fallen ruins of ancient temples, the monuments with their inscriptions, and what has been brought up from ancient sepulchres speak to us of the lives of a great people, whose many generations lived and passed away before the beginning of the world's history. In this land of stone and dry drifting sands above the waters of the Nile have been preserved through the ages the written records, the marks of a civilization, and the mummied forms of human inhabitants, the existence of which was otherwise only known in tradition. These records of the distant past are more real and reliable than the stories of the history of other ancient peoples which have come to us in other ways. Many of these records, found in their resting places by explorers in modern times, are now preserved in the great museums of Europe, and a few have come to America. The mythological period of Egypt is from the beginning, whenever it was, to the reign of the Egyptian King Psammetichus who died about B. C. 617 years. The later ancient history of the country is found in the works of early Greek and Roman writers, and in the history of the Jews in the connection of this people with the Egyptians. Two important papyri, containing much which pertains to ancient Egyptian medicine are preserved; one at Leipsic (the Ebers Papyrus)† and the other at Berlin. Concerning the papyrus at Leipsic Baas' History has the following:

"The Papyrus Ebers is only partially deciphered, but it is believed to have been written between 1550-1547 B. C.; It exhibits to us a compilation whose contents are the works of several persons; for even an oculist of Byblos in Phœnicia is mentioned as one of the associate authors. In this we have proof that, even at this extraordinarily early period, medical science was international, and that even then (as we see in Ziemssen's Codex today) servants of a foreign, though neighboring nation, took part in such compilations. This papyrus was compiled under the king Ba-kerh-ra, probably at On (Heliopolis), where was located a famous sacerdotal college, in which, as in the Museum at Alexandria at a later period, policlinical treatment was practiced." Following this is given as copied from the papyrus a list of remedies for diseases mentioned, various writings of physicians and marginal notes written by others at a later date endorsing the prescriptions as having been tested in practice. The papyrus in the Berlin museum is less in extent than the Ebers, but is important as a historical relic. There is also in the Berlin Museum a medicine chest marked as belonging to the wife of Pharaoh Mentu'-hotep of the eleventh dynasty, about B. C. 2300. It is described as a wooden chest in which is a basket of straw-work containing vases of alabaster and serpentine, dried remnants of drugs, two spoons, a piece of linen cloth and some roots.

The valley of the Nile in its whole course through Upper and Middle Egypt has extensive ruins, showing what was the magnificent architecture of ancient cities. Monuments and columns remain from whose inscriptions much ancient history is obtained. The famous temple of Zodiac is at

†Ebers (Georg), a German novelist and scientist was born at Berlin in 1837, was educated at Gottingen and Berlin, in 1870 was professor of Egyptology at Leipsic. One of his principal works is entitled "A Scientific Journey to Egypt," and most of his studies and writings have reference to this country. In 1874 he obtained at Thebes the famous papyrus which has received his name and which is now preserved in Leipsic.

Denderah, the ancient Tentyra, in Upper Egypt on the west side of the Nile. The city of Ammon above this is the place of ancient Thebes. The temple of Jupiter Ammon yet exists at Carnae. At Philæ is shown the tomb of Osiris. Thomas Dew in his "Digest of the Institutions of Ancient and Modern Nations," after enumerating these and many other ruins of Ancient Egypt, observes: "On these monuments we see much that became the model to the Israelite. The tabernacle, the temple, the sacred utensils of the Jews had all their prototypes in this monumental land."

Thus Egyptian ancient history is monumental. In this there is a liability to exaggeration of the comparative importance of persons and events. Besides it is fragmentary; but, unlike that obtained from oral traditions, once being recorded in stone it remains through the ages unchanged.

THE FIRST PHYSICIAN.

In the village of Sakkara on the left bank of the Nile south of Gheezeh near the pyramids of this name is the tomb of Sekhet'-enanch, who was chief physician to the Pharaoh Sahura. This was the king of the fifth dynasty, perhaps B. C. 3533. Concerning the history of this tomb and that of its original occupant various writers have the following. The physician, Sekhet'-enanch, had healed the king's "nostrils," for which his majesty wishes him "a long life in holiness." "Then the chief physician spoke before Pharaoh: 'May it please thy soul, beloved of Ra, that there be given me a limestone slab like a door for this my tomb in the West-land.'" The narrative continues giving account of the king's furnishing the beautiful tomb with its inscriptions, which has stood as a monument of history to the present time. The English writer, Dr. Withington, has the following mention:

"This appears to be the first mention of a physician in history, for though the older Egyptian dates are uncertain—that given above being the one accepted by Brugsch and the British Museum authorities—few modern Egyptologists would place the fifth dynasty later than B. C. 3000, and we would safely assert that the interval between Sekhet'enanch and Hippocrates was at least as great as that which separates the 'Father of Medicine' from our own day. Physicians, as a class, are referred to in still more ancient inscriptions under the term 'snu,' a word represented hieroglyphically by what seem to be a lancet and cupping instrument."

SPECIALTIES IN EGYPTIAN MEDICINE.

Specialties in the practice of medicine seem to have existed from the beginning; account of these appears on the papyrus Ebers, much of which is supposed to relate to an unwritten history many centuries before the time of this writing, B. C. 1560. Herodotus, writing of early Egyptian applies himself to one disease and no more; all places abound in physicians; medicine, says: "Here each physician some for the eyes, others for the head, others for the teeth, others for parts about the belly and others for internal diseases."† There were rlso veterinary physicians and surgeons, mentioned as fowl doctors and cattle-doctors, evidence of whose existence and methods of practice are preserved on the monuments.

Dr. Baas writes concerning this ancient Egyptian practice as follows: "This specialism is per se an evidence of a civilization of high development, indeed one tending towards its downfall, and in Egypt it attained a perfection which our system, with all its completeness, has not yet reached. We know that the sick were visited and treated at their homes by the physicians. The latter must first, however, be sent for to the President of the temple, who then selected and dispatched to the patient the specialist best suited to this case. The sick were also treated as out patients in the temples. Persons of rank had their physicians-in-ordinary."‡

SURGERY AND MEDICINE IN GENERAL.

Concerning Surgery, Dr. Baas observes: "In operative surgery physicians of the warlike Pharaohs accomplished considerable, and obtained results fully capable of refuting the denial of this fact dictated by the self-sufficient national vanity of the old Greek writers. They bandaged ulcers, practiced venesection and cupped by means of horns sawed off near the point. They performed circumcision in accordance with the precepts of their religion, using apparently knives of flint.* . . . They practiced lithotomy with a dexterity preserved as a secret, and indeed, performed amputations, as pictures found at Thebes and Denderah testify. In ophthalmic surgery they were especially skillful, and it is highly probable that they operated for cataract. Imperfectly united fractures and artificial

†Herodotus. Book II. ch. 84.

‡Baas' History of Medicine—Handerson—p. 17.

*Circumcision among the Egyptians is as old as the 4th dynasty, is supposed to have been adopted as a sanitary measure and as in case of other observances, became with the Egyptians and has continued to be with the Jews a religious rite. Flint knives used in embalming, and such as may have been used in circumcision and for other operations have been recovered.

teeth have been found in mummies. . . . A great number of surgical instruments have been discovered." Representations of early Egyptian surgical operations appear on monuments.

The medicine of ancient Egypt can be considered only as an art, and that but partially developed; the Asclepiadæ of Greece with Hippocrates have been called the originators of the science of medicine.

In Egypt, as in Babylon, there was a custom of exposing the sick in public places that they might be advised by those who passed by.

The following from the Ebers papyrus is given as an example of diagnosis and therapeutics:

"When thou findest anyone with a hardness in his re-het (pit of the stomach), and when, after eating, he feels a pressure in his intestines, his stomach (het) is swollen, and he feels bad in walking, like one who suffers from heat in his back; then observe him when he lies stretched out, and if thou findest his intestines hot, and a hardness in his re-het, say to thyself this is a disease of the liver. Then prepare for thyself a remedy, according to the secrets of the (botanical) science, from the plant *pa-che-test* and dates, mix them (misce), and give (da!) in water, etc." (Ebers.)

MEDICAL EDUCATION AND DISCIPLINE.

Prosessor Puschmann of Vienna has given in brief a statement concerning the status of medical education in ancient Egypt and the character and standing of physicians. The following extracts will explain: "The position of the medical profession in Egypt, like that of other learned callings were on a level with the position of the priests; and doctors were accorded corresponding privileges. In the schools associated with the temples not only priests but judges, doctors, astronomers, mathematicians and other learned persons were trained. . . . The most renowned of these schools were at Heliopolis (the ancient "On") Memphis, Thebes, Sais, and Chenu. . . . The pupils lived in the houses attached to the school under the inspection and discipline of the teachers." The followsng words quoted as a sample of the warning and advice from teachers to pupils, are as good and as appropriate now as then: "Let not idleness overtake thee, else thou shalt be severely chastised. Hang not thine affections upon pleasures and take care that the books fall not from thy hand. Exercise thyself in conversation and speak with thy superiors in learning. When thou shalt grow older thou wilt recognize how important is this: whoso is dexterous in his craft achieves power and fame." The old Greek Egyptian teachers and writers were happy in forcible illustration: The pupil who had been guilty of neglecting his studies and wandering from tavern to tavern was admonished in words as follows: "What profitheth the odor of beer? Avoid it; for it drives people away from thee, impoverishes thy wits, and likens thee to a broken oar upon the deck of a ship."

The schools of medicine at the cities above named were not only institutions for instruction, but, like the early Grecian schools, were communities of physicians. Egyptian physicians acquired a reputation abroad. As said by Herodotus, The Persian king Cyrus called an oculist from Egypt to the case of his mother, and Egyptian physicians were brought to the Court of Darius. This is concerning medicine and physicians not later than the sixth century B. C., and more than three centuries before the establishment of the Alexandrian Schools and Library under Greek control in Egypt.

Some Amusing Instances of Nasal Reflex. †

By ARTHUR G. HOBBS, M. D., Atlanta, Ga.

It was not without some misgiving that I thus christened this little paper, because some might regard it as too flippant a manner of approaching so scientific a subject as nerve reflexes; a subject fraught with subtilties and as yet so suggestive of unkown quantities. Also because there may be others who can never look upon nature's phenomena as amusing, however, vigarous and unexpected they may at first appear. While these instances of nerve reflex manifestations that I have dared to call amusing are no more wonderful than many others somewhat similar, but more familiar to us all by reason of their frequent occurrence, nevertheless for this very reason, together with the particular organs involved, many of us at first cannot avoid seeing the ludicrous side, however easy the scientific explanations, by analogy, may seem. Familiarity with frequent re-currences of nature's perversions does not breed contempt but it does dull the sense of the ludicrous.

Still, I have a feeling even now that I should have said: "Some interesting instances of nasal reflex," so if they are not amusing, I can hope that they may be at least in some degree, interesting.

I had never seen but one case of priapism, and that was in 1879, during my term in the New York Hospital, until by accident

†Read before the American Laryngological, Rhinological and Otological Association in New Orleans, March 3, 1897.

the second case under my observation in 1888.

A young bank cashier was driven from his rooms to my office in a close cab wearing an overcoat on an August day. He had been confined to his room more than two days with a painful attack of priapism for which he said he had run the gauntlet of all treatments, from hot and cold water locally to salines, opium and apomorphia internally, without any effect. He looked haggard and pale, and in many ways the results of his great suffering were plainly shown. The object of his visit to me was to be relieved of an acute rhinitis accompanied with an almost complete nasal stenosis. I sprayed the nose slowly but persistly with a solution of cocaine in alboline until the engorged turbinal tissues relaxed sufficiently, within about five minutes to allow a comparatively free passage of the spray through both nares. About this time, with an expression of great joy, the young man exclaimed: Doctor, not only is my nose free and I am relieved there, but see! it has all gone down and I am perfectly easy." His cocaine exhilaration was scarcely perceptible, and indeed I would not have recognized any but for my anticipation that there might be some. As the nasal turgescence disappeared, so did a complete relaxation in the principal organ of erectile tissue follow.

How singular it was that a second case of priapism should have followed in the latter part of the same year, and yet in the nine years that have since passed, I have not seen or known of another case. This second case—a young man age about twenty-two—was in many respects similar to the, firist except that he had suffered only intermittantly, but during a longer period—five days. And yet his relief lasted only during a decided opium narcosis and the pain gradually when the effect of the narcotic began to decline. His exposure to frequent application of hot and cold water had probably caused the acute aural catarrh, with a moist and stuffy nose, notwithstanding the large amount of opium he had taken. The subjective symptoms of pain and tinnitus together with the visibly retracted drum membrance suggested a nasal spraying with the same cocaine solution in alboline, as I had used in the first case, before inflation. This young man had come to me for his aural and nasal troubles, and I was not aware of his priapism until after I had relieved it indirectly. His exclamation of delight was as prompt and no less decided than in the cashier's case.

I saw both of these cases several times during the succeeding two or three days. There was no intimation of return of the priapism in the first case, and in the second only in a slight degree several times.

The soft tissue that covers the turbinal processes is not histologically dissimilar to the corpora cavernosa, hence the question: was the distal effect by reflex, or through the direct systemic influence of the cocaine on the arterial constrictors?

Would cocaine have produced the same result during its exhilerating stage had it been administered otherwise.

Although I have been using cocaine constantly from the early eighties—indeed since I received a consignment of a part of the first half ounce imported from Koller's laboratory, I did not know as much of it's potences—nor did any one else then as the novice thinks he knows now. Yet will our present knowledge of the therepeutic properties of this drug explain how it effected these results?

I casually mentioned these two cases of priapism before the Atlanta Academy of Medicine about seven years ago, in a discussion on an allied subject, but do not remember that my remarks were published.

An unaccountable sneeze is produced in some persons merely by an erotic thought when accompanied by the desire and the anticipation of its fruition. All whom I have questioned upon this point say that the sneezing reflex passes off long before the usual and more important erectile area has been stimulated to its full limit of distention.

I do not doubt, from the accidental way in which some seven or eight such instances have came to my knowledge, that many more men are endowed with this faculty than we know of. From the descriptions it is characteristic and quite unlike the sneeze that first announces a cold.

A gentleman once described his own case to me more graphically than I can repeat While walking, he said, one evening, arm in arm with a lady, his wife who was but a short distance in the rear was surprised at hearing a succession of sneezes that she first mistook for his characteristic sneeze, with which she thought she quite familiar, but later on she was amused at her own mistake and no doubt delighted too, when she realized that what she had heard was only the ordinary commonplace, bad cold, sneeze (?) that any man might, unfortunately, contract at the wrong time.

A young man has confided to me that he was constantly mortified and placed at his wits end in making excuses to his sweetheart on account of his susceptability (?) when with her, to drafts (?) that she could in no way discover. Several men have, with some encouragement from me finally acknowledged that this little tell tale

reflex had been their principal cause for consulting me.

A prominent physician very graphically described his own experience with these dual reflexes. It came to him so insidiously, he said, that he could scarcely realize it. Indeed his wife had become quite familiar with the characteristics of his fore runner long before he would himself acknowledge it.

None of the means that are ordinarily resorted to can suppress this sneeze; it simply means to announce that "Barkis is willing," or would like to be, at least that such an idea exists in the brain of its victim whether or not it can be properly and effectually reflected.

In all of the cases without an exception it would appear that the effect on the sneezing area has come and gone before the same mental reflex stimulous has had time to reach its usual result of erectile perfection.

A sneeze is one of the most typical examples of a nerve reflex, and while the neurologist can only construct a beautiful theory to explain its incentive and conductive factors, pathalogist agree that the final result is brought about by the swelling of the erectile tissue covering the turbinal bones. The histological simularity between the tubinal tissues and the cavera cavernosa is quite sufficient to cause no sense of wonder or surprise when a mental impression that excites one should also excite the other even within pathological bounds, although we are accustomed to regard the one as an entirely physological function and the other as distinctively pathological.

The instances just cited prove, however, that it is only the turbinal tissue that possesses the dual capacity of responding to either a physological or a pathological stimulous, also that it's response to a mental stimulous always precedes the more important effect below and is lost before the distinction of the cvera cavernosa is complete. It may be answered that a priapism is a pathological condition, and yet it's beginning is physological. It is not fortunate too that every time we get our feet wet the reflex result on this lower and larger area is not the same that is so often produced on the turbinal tissue by an over stimulus from an external source?

It has not been my intention to treat this subject lightly. It is too closely allied to one man generally, I believe, do not disregard, "with but one single thought." But seriously, I do think the paper could be more appropriately read before a section on neurology, unless we can claim that rhinologists can be neurologists too,at least in some particular directions when they choose.

I would be glad to receive a short history from any one, of any case apropos to this subject of reflexes and will promise to give due credit to the writer in a future, and I hope more comprehensive paper.

P. S.—During the short interval since I read this paper, I have been much gratified by receiving a number of letters from those who have seen its first epitomised report; many of these letters contain promises of short reports to me of cases either bearing directly on, or closely relating to, the subject of erectile tissue reflexes. This subject is an evolution (so far as it has evolved) of the last six or eight years, and it is not one of my choosing. Yet I confess a desire now to evolve it still further, if I can obtain sufficient data.

The Removal of Irreparably Diseased Ovaries, Tubes, Etc., by Enucleation With Ligation of Vessels Only.

Forceps as Temporary Hæmastatics, Levers and Tractors, an Addition to the Enucleation Method.

By J. Coplin Stinson, M. D. C. M., San Francisco, Cal., U. S.

In deciding on an operation for the removal of an ovarian tumor, pyosalphynx, etc., we should use a method which is simple, safe, scientific and will not be followed by any untoward symptoms. Such a method we have in enucleation with ligation of vessels only. This method is in most cases a comparatively simple procedure, at times it is difficult e. g. when the pedicles are short, deeply located in the pelvis and cannot be easily controlled, when the broad ligaments retract quickly, when the surgeon cannot, or does not wish to keep close to the cyst or tumor, etc., when the broad ligaments are thickened and very bascular; when the uterus etc., are fixed by periuterine or other adhesions and in most operations for the removal of the uterus, either vaginal, abdominal, or combined vagino-abdominal hysterectomy.

Under such circumstances one should first enucleate the mass, as far as possible, so as to expose the pedicle which is then clamped and cut off between the mass and the forceps. By drawing moderately on the clamps, using the latter as levers and tractors the severed pedicle can be brought to the surface, and inspected for open months of vessels which are ligated separately with fine cat-gut. In these cases the forceps are an addition to the enucleation method.

It is the common experience among oper-

ators, that after the removal of an irreparable damaged appendage or appendages that the patients are not cured of their symptoms. I believe that the continuance of the symptoms in most of such cases is due to the universal custom of ligating the pedicles of the ovary, tube, or broad ligaments with mass ligatures. The pedicle should not be tied with a mass ligature or ligatures or transfixed or tied in sections, for while such ligatures do control the vascular supply of the structures that have been removed, they also interfere with the physiological actions, relations and uses of the other structures which make up the pedicle. Enucleation with ligation of vessels only with absorbable ligatures, does away with mass. Now, absorbable, dead, and wanderiug ligatature, sloughing painful and adherent stumps, pelvic exudates, the cautery secondary adhesions, etc., any of which cause a continuance of the symptoms after the diseased structures have been removed. In earlier papers, (New York Medical Record, July 20, 1895, The Theapeutic Gazette, May 1896. The transactions of the San Francisco County Medical Society, Dec. 6, 1896, I described and reported cases in which I had used successfully the enucleation method. Two principles are involved in the satisfactory performance of enucleation. The first is to dissect, as close as possible to the mass to be removed, this reduces bleeding to the minimum, as one divides only arterioles or capillaries the ozing from which stops almost at once. The second is to keep the immediate dissection well in view, and if any vessel is divided, catch it at once with forceps and ligate with fine cat-gut or tendor.

The techinque of enucleation is best described by citing a couple of my cases.

Case I. Endometritis, tubo-ovarian abscess and ovarian cystoma with adhesions. Operation. Under chloraform administered by the drop method. The patient was first placed in the lithotomy position, cervix dilated, uterus curetted, carbolic acid and iodine, 1 in 4 applied to the interior of the uterus, cervix again dilated, and the uterine cavity irrigated freely with boiled water. The legs were then extended and an incision about three inches long, was made above the pubes, dividing slightly to one side of the median line, the skin, subcataneous tissues fascia, rectus and peritoneum. In introducing the fingers, the omentum and intestines were found adherent to the appendages and the fundus uteri. On account of the extent of the adhesions and the size of the masses, it was found necessary to enlarge the incision slightly. The entire length of the incision was now three inches and three quarters. The fundus uterri could not be felt, so the adhesions on the left side were separated with the fingers till the mass on this side could be partially felt. During the separation of adhesions the mass rupture and about one-half a pint of creamy chocolate colored fluid escaped. Pitcherful after pitcherful of hot water was poured in till the fluid came away clear. Carefully working toward the uterus, separating the adhesions, after a while, the fundus was exposed. The left mass was enucleated, beginning at its outer extremity the blunt dissection, aided at times, by cuts with the scapel, was carried as close as possible to the mass (a tubo-ovarian abscess). The enucleation was carried as far inward as the uterus from which the mass was removed by dissection flush with the uterus. The pedicle was not tied, but was removed by enucleation without ligature, clamp or cautery. There was no bleeding so no ligature or clamp was applied. The adhesions behind the uterus were separated. The right table and ovary were next sought for. The ovary was found buried in adhesions. The tube was apparently normal. The ovary which contained a cyst, about the size of a mandarin, was separated from the adhesions and the surrounding, and with the tube was enucleated, by blunt dissection aided, at times by cuts with the scapel. When the uterine end of the tube was reached, the serosa of the tube about one quarter of an inch from the uterine cornua was divided, in a circle and dissected back to the uterus. The tube was then cut off at the tubo-uterine junction, and the cut edges of the serosa, which had been dissected back, were united by a continous cat-gut ligature. The oozing from the adadhesions was arrested by hot water irrigation and sponge pressure. There was no bleeding, so no ligature or clamp was applied. A couple of tears on the fundus of the uterus were closed with continuous catgut sutures Two narrow gauze wicks were carried down into the cul-de-sac and the ends brought out through the lower angle of the incision. The omentum was drawn down and spread over the intestines. The cut edges of the peritoneum were united with continuous fine chromicized cat-gut sature. The divided edges of the rectus and the fascia by a continuous chromicized tendon suture. For the nice approxination of the fascia a layer of the fine chromicized cat-gut was also introduced. The skin edges were sutured with fine silk; only sufficient room was left at the lower angel of the incision for the passage of the gauze wicks, The uterus was not removed as it was in good position, and had been curetted. The patient made a satisfactory recovery. The wound healed by primary

union; highest temperature 101 rectal. The small drainage wound was healed three weeks after the operation. At last report January 15, 1897, she was in splendid health, complained of no abdominal or pelvic symptoms, except at times when bowels were constipated when she had some slight pains.

Case II. Fibroid of the ovary. Operation under chloroform administered by the drop method. The patient was placed in the dorsal position with the legs extended. A median incision was made above the tubes, extending within about fourth inches of the the lusiform cartilage. On opening the peritoneum some adhesions were found; these were separated. The tumor which weighed about fourteen pounds was brought well to the surface. The pedicle which was short, but broad was clamped transversely close to the tumor with four or five long hysterectomy clamps, and then severed close to the tumor between the tumor and the forceps with a scalpel. Drawing moderately on the forceps, using them as levers and tractors, the severed pedicle was brought to the surface inspected and open mouths of vessels ligated separately with fine cat-gut. Then the clamps were removed, first applying small forceps at the upper and lower angles of the pedicle. The cut edges of the serous coat of the pedicle were united with a continuous fine cat-gut suture, so that there would be no raw surfaces left to form adhesions. The fallopian tube was normal, so it was not removed. The other tube and ovary were examined and were found normal. The cut edges of the peritoneum were united with a continuous cat-gut sature. The fascia with a chromicized tendon suture and the skin edges also united without drainage. The patient made a satisfactory recovery and was up and around three weeks after the operation. At last report Jan, 1, 1897, was in splendid health, menstruation regular, no pelvic symptoms.

The writer has successfully removed ovarian tumors, cysts, and abscesses, adherent ovaries and tubes, the uterus, etc., by enuclea tion, ligating the vessels only. In two cases the appendages were removed by enucleation without ligature clamp or cautery; no vessel was ligated as there was no bleeding.

The enucleation operation is advocated for the removal of all such masses as ovarian cysts, tumors, etc., irreparably damaged tubes, e. g., pyosalpynix, etc., tubes the seat of ectopic gestation, etc., uteri when lysterectomy is necessary as the safest, simplest method of dealing with such masses.

From a study of many cases treated by the several methods of operation I can only draw the following conclusions:

1. That an irreparable diseased tube ovary, etc., should be removed by enucleation with ligation of vessels only; using absorbable ligatures.

2. That enucleation is the simplest, safest method of removing an ovarian cyst, tumor, etc., of the ovary, tube, uterus, etc. There is no danger of hemorrhage, if a vessel is severed it can be caught at once and ligated.

3. That as no untoward symptoms follow enucleation; there are no secondary operations necessary.

4. That the ligation of vessels only does away with the tieing off in sections, the tieing and transfixing of pedicles, mass, non-observable, dead, and wandering ligatures, sloughing, painful and adherent stumps, pelvic exudates, adhesions, and the cautery, etc.

5. That with enucleation there is little or no danger of injurying adjacent viscera, recovery is rapid, and the danger of sepsis is reduced to the minimum.

6. That when a fallopian tube is removed it should be completely, no stump should be left. When the serosa of the tube at the tubo-uterine junction is not totally destroyed, it should be divided in a circle about one-quarter of an inch from the uterine cornua, dissected back to the uterus, and after the removal of the tube, the cut edges united by a continuous fine cat-gut sature.

7. That in removing an appendage, or uterus, etc., by enucleation, the cut edges of the broad ligament should be united with a continuous absorbable sature.

8. That even when both the appendages are removed; a uterus that is in good position and not irreparably diseased should not be exterpated.

9. That it must not be forgotten that at times enucleation is difficult. Under such circumstances the surgeon should first separate the adhesions; then enucleate the mass, so as to expose the pedicle which is clamped with long forceps and then cut across, close to the uterus, between the mass to be removed and the clamps. The forceps are used as temporary hæmostatics levers and tractors while the vessels are ligated separately with fine cat-gut. Thus they are an addition to the enucleation methed.

326 Kearny St.

Sunstroke.

By E. L. Tompkins, M. D. Washington D. C.

As the warm weather approaches, we who live in large crowded cities and attend

large emergency hospitals, and are accustomed to seeing many cases of sunstroke, naturally begin to think of the best and newest methods of treating this terrible and rapidly fatal disease.

In the first place the words "sunstroke" —"insolation"—"coup de soleil" are all misnomers as they give the impression that the disease is the result of the direct rays of the sun, whereas it is well known that persons can and do have the disease well-marked who have not been in the sun at all. In our opinion the word Heatstroke would be the better name as that would express the meaning no matter how the disease was acquired.

There is no doubt but that many persons suffer from Heatstroke as the result of their own carelessness, such as exposing themselves unnecessarily to excessive heat, either that of the sun or otherwise, too much clothing during the very hot weather or drinking alcoholic drinks, which not only increase the animal heat but congest the brain.

The treatment has been more successful during the last few years at the Emergency Hospital of Washington, D. C., where the majority of cases of heatstroke of that city are immediately carried. The various drugs that are known to lower the temperature, such as quinine, aconite and the several coal tar preparations have all been discarded and reliance is put entirely in the ice water bath. The patient is put at once on a table arranged for the purpose, with raised edges, so that the water will run through a hole at the lower end of the table. Ice is applied to the head and the whole body and a stream of cold water from a hose is made to play over him. If the patient is full and plethoric bleeding is resorted to with very good effect but it has been our experience that the blood is so thick that it is with the greatest difficulty that it can be made to flow and often it comes only in drops. This is at variance with the text-books which state that the most marked appearances of the morbid anatomy are the extreme fluidity of the blood. Bleeding and injection of the normal saline solution which have been recommended for the coma of uræmia have also been used in these cases. The cold water treatment is continued until the temperature to 100 deg., F. He is then taken to the ward and put to bed and the temperature taken every half hour, as it is very apt to rise again. If it goes up beyond 103 deg., F. he is again put in the ice bath. If not, he is simply sponged off with cold water and remains in bed. If the pulse fails either while on the table or after he is in bed, hypodermic injections of strychnia are given as often as neceseary. The tendency to pneumonia as a complication is very great and the lungs should be looked after very carefully for some time. The patient is very apt to suffer from headache and nervous symptoms for a long time as the result of the congestion of the brain. A mixture of sodium bromide with pepsine and charcoal will usually be sufficient. Frequently the most obstinate convulsions occur and continue even after the temperature is reduced. The writer recalls one case whose temperature on admission was 110.5 deg., F. and even after the temperature was reduced, convulsions continued during the whole of one night and could only be stopped by the administration of chloroform. As soon as the effect of the chloroform would wear off the convulsions would start again. The patient finally made a complete recovery.

Another interesting case was that of a woman, whose temperature on admission was also 110.5 deg., F. Hers was a genuine case of heatstroke as she had not been out of her house at all. It took a much longer time than usual to reduce her temperature; her pulse became so weak that as much as one-tenth of a grain of strychnia was given and other drugs had to be resorted to, such as digitalis and nitro-glycerine.

The ice water treatment was kept up and about one pint of blood was taken from her in drops. The temperature finally came down and she was put to bed, but at various times convulsions would come on and chloroform had to be given. She had no pneumonia but was much annoyed by bronchitis and about the third day by an emphysema of the skin, covering the breast, upper part of the chest, shoulders and neck. This could only be accounted for by the possibility of the mucous membrane of the trachea being ruptured during a convulsion. It was relieved by bandaging. About the fifth day the left leg and thigh began to swell, the skin was glazed and tense and there were several small abscesses where the hypodermic needle had been inserted, appearing to be septic, although the needle was supposed to be perfectly clean and the usual precautions were taken. The urine became lessened in quantity, had albumen and casts and she died about the eighth day after admission.

The main point to be remembered are to reduce the temperature by mechanical means and not to give drugs that depress the heart.

Prof. Hilgard, of the State University, Berkeley, finds after careful investigation, that California fruits have far greater food strength than European fruits.

Bromidrosis.

By H. L. Mason, M. D., Brooklyn, N. Y., Resident Physician Green Park Hotel, N. C.

I would like to call the attention of your readers to a new and successful treatment for Bromidrosis. There are thousands suffering from this disgusting disease, which makes their lives miserable, debaring them from society and causing them to be slandered by being accused of uncleanliness.

Many of them aggravate their complaint by almost par-boiling their feet. Few of these sufferers seek the advise of a physician, but usually consult a chiropodist, who sells them some scented soap or toilet water at a high price.

Most of your readers will remember a case from Brussells in 1890, when the Baroness De Flaggrasse brought suit for divorce upon the grounds that the Baron's feet were so disagreeable to her that her life was miserable. During the trial she testified that "the odor arrising from them was like that from a Goat, combined with the flavor of onions and Asafoetida."

Sometime since a young man consulted me with an agravating case, the odor of which was very much like that described above. I instructed him to thoroughly cleanse his feet with warm water and soap and dry them with a turkish towel; then to bathe them in a solution of Hydrarg Bi Chlor 1 to 4000-5000 for a few minutes, and after again drying them to anoint them with Unguentine, rubbing it in well, and to put on clean *wollen* socks. In some cases I have found that dusting the feet with Bismuth Sub Gallate in the morning helps the cause along. Frequent bathing of the entire body and general cleanliness are of course understood. If this treatment is followed carefully I think it will do all I claim for it.

I have treated a number of cases in the same manner, as many as three in one family, all with most excellent results, and have recommended it to other physicians, who have used it with the same satisfaction I have. As such cases are a matter of much interest, and I have never seen a case reported before, I send you this for the benefit of your readers, many of whom doubtless have a case, for which they would be pleased to know a remedy.

225 Stuyvesant Ave.

Chronic Non-Suppurative Otitis Media.

Dr. S. MacCuen Smith read a paper with the above title before the American Laryngological, Rhinological and Otological Society at Washington, D. C., May 1st, 1897.

This disease has a naso-pharyngeal origin, often progresses without symptoms, and may seriously impair the function of the conducting apparatus before being recognized. The prognosis will be more hopeful if treatment is instituted early. Correct the naso-pharyngeal lesion by local treatment, and *re-establish nasal respiration.*

If, however, ankylosis and adhesions have developed, make an incision the whole length of the long hand of the malleus, introduce a small knife, with cutting edge at right angles to handle, divide the bands of adhesion, insert a small hook, grasp handle of malleus high up, and with gentle but firm traction, break up ankylosis. Instil fluid albolene, and pack with iodoform gauze.

Later, massage with Siegle's pneumatic speculum is of the greatest importance. Hypodermic injections of pilocarpine are useful. Having operated on a large series of cases, we may conclude:

1. That the best and most permanent results can be obtained from the use of conservative treatment, as outlined above.

2. That as the operative procedure herein suggested is practically without risk, its adoption seems advisable before more formidable operations are resorted to.

3. That the majority of cases without labyrinthean implication can be relieved of tinnitus and vertigo, and greatly improved in their hearing power.

4. That chronic cases, with internal ear involvement, do not offer hope for a continued improvement in hearing power, but may frequently be relieved of tinnitus and vertigo.

5. That *excision* of any part of the conducting apparatus is only justifiable when relief from severe tinnitus and vertigo is the object of treatment, and other measures have failed.

Missed Labour; Four Years' Retention of Fœtus,

Resnikoff, says the Edenburgh Medical Journal, removed from the uterine cavity the skeleton of a 7-months' fœtus four years after its death. At the seventh month of the pregnancy the patient suffered from some febrile malady. Labour did not follow, and constant purulent discharge troubled her till the fœtal remains were removed; a few small bones came away occasionally in the discharge. The uterus was large, but movable. The parametrium and appendages were healthy,

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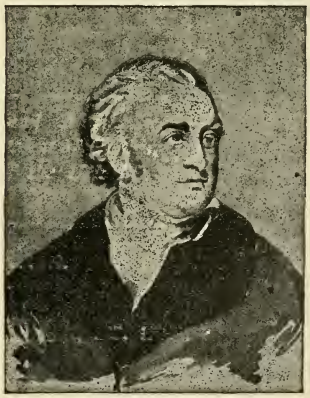

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THE INSANE ASYLUM SUPERINTENDENT.

We cannot over express our gratification at the decision of the Supreme Court of North Carolina wherein they have sustained the claims of the present incumbents and superintendents of the State hospitals situated respectively at Raleigh and Morganton for the whites, and at Goldsboro for the colored race. The professional and lay intelligence of the State will approve and sanction this decision, which will continue to preserve this class of unfortunate individuals in the charge of expert physicians. It is not only irrational but cruel to transfer this people to the hands of the inexperienced because of the demands of party favoriteism. No element but the humane and scientific should enter into a consideration of the care of these helpless ones. The superintendent should have special training and skill for this work, and of all other kinds of professional duties the care and treatment of the insane is the most difficult to understand and use, and none but the most tried and experienced should attempt to fill such positions of such responsibility.

We congratulate Drs. Murphy and Kirby upon the success of their cases. They have both made able and commendable superintendents of the institutions in their care, and their services have been satisfactory in every way. We are pained to think that any party or persons can so far forget their duties to humanity as to attempt to select officers for an insane asylum because of political services in the past.

MEETING OF THE NORTH CAROLINA MEDICAL SOCIETY.

The forthcoming forty-fourth annual meeting of the North Carolina Medical Society will be held at Morehead City, the second Tuesday in June, the 8th.

For several reasons the occasion promises to be exceptionally interesting, both in its social and scientific features. As is known the profession is to be the guests of the Newbern members, and their hospitality is characteristic for its thorough generosity. With regard to the scientific features, the presidency of Dr. P. L. Murphy is sufficient guarantee of what it is calculated to be.

There are already a number of valuable papers promised by some of our most representative men, and the contributions from this source will doubtless be of much value.

We would insist upon a full attendance at this meeting. The busy members of the profession cannot take a few days off to a better advantage than by attending the meeting at Morehead City.

We would like to add in this connection that it would conduce to the scientific interest of the meetings, and favor a free and more elaborate discussion of the several papers presented, if the programs giving the topics of the papers were issued and sent out several weeks before the meeting, instead of a day or two before, as is the rule now. This would give members some time to read up and recall their experiences upon the subjects, and would in every way add to and facilitate their discussion. We trust that this will be done for the reasons given.

CULTIVATION OF DIAGNOSTIC ABILITY.

The ability to diagnosticate those perversions of physiology and anatomy we call disease is one that the physician has great reason to cultivate.

It is worth while for the physician to often review all matters of diagnosis, and especially the elementary truths of this branch of his knowledge.

In the first place it is worth while for the physician to ask whence comes the ability to diagnosticate disease.

A knowledge of the phenomena of disease is not intuitive. That is to say no one is born with such knowledge, neither is such knowledge necessarily acquired by the growth and development of the individual. The power to acquire such ability is, however, inherent in man and develops with natural growth.

This capacity for acquiring knowledge is however a very different thing from possessing such knowledge. This capacity for acquiring diagnostic ability varies in different individuals, but it is safe to assume that all ordinary persons possess it in fair degree, but however individuals may differ in their power to acquire knowledge of disease by inheritance they do not differ at all by inheritance in their possession of knowledge of disease, for by inheritance no one possesses any knowledge of disease at all.

How then is a knowledge of disease to be acquired?

Primarily such knowledge is to be gained by observation. The more exact, minute, and extensive the observations, the greater the knowledge. Such knowledge may be communicated from one person to another; hence there are two ways, and only two, by which knowledge of disease can be gained. These are by our own observations and the observations of others communicated to us. The amount of our knowledge depends, therefore, upon our habits, means and opportunities of observation, and our reception of the observation of others.

Every physician will do well then to look to his habits of observation, his means of observation, and his opportunities for observation, and to his ability and his opportunity to gain knowledge from the observations of others.

It is the cultivated observation, and training and experience in the use of the means of observation that make the good diagnostician, and it is the wide awake use of these powers and means of observation that makes a good diagnosis, and it is just simply the neglect of these that makes the poor diagnostician and the faulty diagnosis.

This knowledge comes not but by trial and by effort, but it does come this way; therefore let every physician cultivate his power, means and opportunity for observation, and he is absolutely sure to become a good diagnostician, and let him habitually use his powers and means of observation, and he is absolutely sure to make a good diagnosis.

ANALOGY OF RHEUMATIC AND MALARIAL FEVER.

The many analogies between the poisons of Rheumatic and Malarial Fevers are good reasons for regarding them similar in nature.

The history of rheumatism and its effects upon the system bears a close resemblance to mias mata. But malaria also bears a close resemblance. Rheumatism is more common in temperate climates; occurs at certain seasons of the year in damp and low lying localities.

But malaria occurs in low lying and damp localities in certain climates and more frequent at certain times of the year. Neither are communicable from the sick to the healthy.

The period of duration is not definite in either; one attack makes one more susceptible in both. Both leaves their impressions upon the system which renders the patient more liable to a recurrence of some of the symptoms. The fever of rheumatism is irregular in its course.

But this is also true of malaria. Malaria is of a remittent or intermittent form generally. But can we not term the acute rheumatic fever, when fever and pain never entirely cease but oscillate a remittent rheumatic fever?

And can we not term a class where an interval of freedom of fever and pain existting between two or more seizures that help to make up a whole course, an intermittent rheumatic form?

Profuse sweating in the majority of cases of rheumatic fever is likewise manifested in intermittent malaria. And in the minority of cases that it does not occur in rheumatic fever is also noticed in remittent malaria. Pathologically, both bring about a change in the blood. Malaria in degenerating the elementary constituents; rheumatic fever in regenerating foreign materials. Unless malaria is stopped by treatment it may lead a protracted course. The same condition exists in rheumatic fever. The course of one is as speedily arrested with large doses of cinchona compounds as the other is with large doses of the salicylic compound. And as we trace the course of these maladies from its incipient stage to that of termination we find clinically a analogism, while etiologically a syllogism of the mias mata.

THE CONSTANT CRY THAT PHYSICIANS ARE STARVING.

The subject of our editorial now under consideration is one of vital importance, both to the medical profession and the laity, but more so to the former. Many articles have been written as well as editorials on this matter, and it would seem by drawing conclusions, that the medical profession is one of the most menial that could be followed. This is an entire false aspect of the situation, and the sooner we get rid of this idea the better it will be for doctors generally. That the profession is overcrowded, I am inclined to doubt i. e. with good, honest, and conscientious men, who are willing to devote their time and brain to their work. The great trouble in these times is that, especially during college days, too many young men work merely for the title or handle to their names, and after graduation no more books, nor any research or study is pursued, what is the result? any one can judge and foretell the destiny of such men.

There is no doubt but that every physician who wants to work can find enough to do. If one would look upon everything as being overcrowded, there would be no new grocery, confectionery, or for that matter any other kind of stores opened, and we

would be at the mercy of big monopolies.

Fees have of course been cut down by men eager to build up a practice, but only to their own detriment in the end. A doctor might as well make only half the visits as to die from overwork, and but little remuneration for his services.

Here also comes in the question of what are commonly known among the laity and doctors as "hard pay patients." Some method should be devised by which a record would be kept at a medical society's rooms of such people, to which only the doctors belonging to the society can have access, and then such patients could soon be weeded out. Beer and bad women seem to be, in most instances, the recipients of such people's cash, and they should in consequence be made examples of. We do not here refer to the indigent poor, who no reputable physician will refuse medical aid.

There is also generally, a lack of business experience and business principles among medical men, and this militates very greatly against their success, principally because doctors frequently come in contact with business men, and to handle such in a business way is all that is required to gain their confidence. Adapting oneself to the situation is one of the first principles of our honored profession, and the cry of overcrowding and starvation should be hounded down as quickly as possible and more honest work performed, and the result will be better fees and the elevation of the profession to a higher rank among the community.

This cry constantly places the doctor on a level with ordinary laborers, and makes it appear as though our services should be "cheap" and not be more respected than any other calling.

ASEPSIS AND ANTISEPSIS IN OBSTETRIC PRACTICE.

It is now well established that the normal vagina of the parturient woman not only contains no pathogenic micro-organisms, but has some power to destroy such pathogenic microbes when these are introduced into this canal from without.

This power to destroy pathogenic microbes is probably in both the vaginal mucous and the cells of the vaginal tissues.

Any washing away or change of this vaginal mucous or any impairment of the cells of the vaginal tissues therefore impairs the powers of these to destroy pathogenic microbes.

It is of course not impossible that something could be added to this vaginal mucous that would increase its destructive power over pathogenic microbes without in any way doing any injury, or again such added agent might altogether destroy the normal vaginal mucous, but be itself more destructive of pathogenic microbes, and at the same time harmless to the parturient woman.

That any such agent has been found, however, is not generally accepted.

Therefore, any douching or washing of the vagina before parturition, is not only unnecessary, but positively harmful, as such washing must remove the vaginal mucous which is to some extent destructive of pathogenic microbes.

All that must pass from the uterus through the parturient canal is non-pathogenic, therefore there is no indication for any douching or washing of the vagina after parturition.

While, however, it is true that the normal vagina is not only aseptic but actually antiseptic, that is, it is not only free from pathogenic microbes, but it is also actually destructive to such organisms, this later power is not great, therefore the greatest care should be taken that everything that comes in contact with the vagina of the parturient woman should be absolutely free from pathogenic microbes, as these are substantially always introduced from without.

The skin about the vaginal opening, like the skin on all other parts of the body, may normally contain pathogenic microbes and it is, therefore, good practice to wash the skin about the vagina of the parturient woman thoroughly with warm sterilized water and then a one to one thousand solution of bichloride of mercury in sterilized water. The vulva should then be kept covered with a sterilized cloth.

The hands of the obstetrician should be thoroughly washed with hot sterilized water and then with a one to one thousand solution of bichloride of mercury in sterilized water.

With these very important truths kept in mind and a scientific practice based upon them adopted by physicians, nurses and midwives puerperal fever ought not to occur.

THE USE AND ABUSE OF COAL TAR PRODUCTS.

Perhaps no one subject has received more ateention in the last few years than this. The infinite variety of these synthetic compounds; the lurid and convincing (?) statement of their several projectors, and the glowing clinical reports, seem to leave nothing to be desired in the whole domain of medicine, for each disease and every variant of the same, now, in these, has its specific remedy. It is an axiom that the curability of a disease or pathological condition is inversely proportional to the number and

variety of the therapeutic agents employed in its treatment. And yet many of these agencies are employed for the same conditions, and each one reaches the case better than any other, but then of course medicine is not an exact science.

But seriously, this is a matter demanding our keenest attention; daily, cases are being reported of serious, even fatal termination, attending the administration of such remedies, and almost in the same breath the most brilliant results are noted.

Why this difference? Why the difference in amount and method of exhibiting these drugs?

We are told it is unprofessional to write articles upon these preparations, as we are thereby advertising indirectly a proprietary or trade-marked article, which cannot be admitted into the pharmacopœa. Still these same gentlemen who hold up their hands in holy horror at thus violating the code of ethics, prescribe them constantly, and do not infrequently resort to the questionable practice of rushing into print in the daily press, or allow themselves "to be written up" in a flashy newspaper article, describing some accident, patient, or operation in which they take great care to pose as the central figure, and thus gain a little free advertisement. If a thing is fit to give to a patient it is surely fit and proper to write and speak about in public. Would it not be far more professional, not to say honest, for us to formulate a system or plan by which every article of this or any other character to be used by the physician, be subjected to a thorough and searching examination and investigation by competent authority, and some definite, accurate information obtained, and if good, retained, if bad or inert, rejected; and not listen to the enconiums of the manufacturers or agents, or the silly gush of some little fellow who likes to see his name in print, on the one hand, and those who, through lack of knowledge of the agent itself or inability to correctly judge of the merits or demerits, condemn it on the other hand. This is surely the more rational and more scientific method of disposing of this question.

CONTINUED MALARIAL FEVER--A MEDICAL MYTH.

There has been more written and taught concerning continued malarial fever and typho-malarial fever than ever Dickens could collect concerning spontaneous combustion, and with as little reason. Any malarial remittent is continued if neglected, and any case of typhoid may have a malarial complication if malaria be present. But no malarial fever is necessarily a continued fever, no other poison being present, and any typhoid case can be rid of its possible malarial complication by a little specific treatment. The following facts speak strongly:

In the North where malaria is scarce in quantity and weak in quality, we never hear of continued or typho-malarial fevers. It is all typhoid there. In certain swamp regions of the South, where malaria runs riot, and is promptly treated, but where typhoid is unknown, we never hear of continued or typho-malarial fevers. The deduction is obvious, either the continued fever is a real case of typhoid or it is an improperly treated case of malarial remittent. Or else it is some other sort of a fever entirely different from either. The latter deduction is very improbable. Yet we hear of many cases of continued malarial or so-called "slow fever;" eliminating typhoid, these cases are slow doctor. Experience has proven that every dose of malarial germs can be killed by an appropriate dose of quinine. But most physicians put their maximum dose of quinine at too small a figure. When the dose of germs in a particular case is too large for their dose of quinine they quit giving quinine and diagnosticate "slow fever." The maximum dose of quinine should not be a certain number of grains, but in a word—"ENOUGH."

This was never more strikingly shown than in Dr. Bedford Brown's admirable article in the January issue of this Journal. He says, on page 25: "Sixty grains of quinine per day of twenty-four hours, given in doses of ten grains every four hours, would invariably arrest the attack in seventy-two hours, and frequently in less time. Thirty grains per day would prolong the attack five or six days, especially if given in three grain doses every two hours. Twenty grains per day would prolong the attack between one and two weeks, and fifteen grains per day would prolong it from three to four weeks."

There you have a case of "slow fever." But the above was concerning malarial fever, probably of the ordinary remittent type. It is to be regretted that on the next page Dr. Brown does not advocate an even more vigorous treatment for the severer form, which even he calls the prolonged variety. He merely recommends twenty grains of quinine per day to partially control the symptoms, though he admits that thirty grains per day of the bisulphate will abort this "prolonged variety" in two weeks. Reasoning back on his own statements sixty grains per day would abort it in one week, and one hundred and twenty grains per day would abort it inside the seventy-two hour limit. In actual practice it will take more

in certain cases, as much as thirty grains in acid solution every four hours, or one hundred and eighty grains per day having been found necessary and satisfactory in one unrecorded case. If that much is needed no bad effects need be feared. Generally the largest doses are required because even the solution is but little absorbed in such cases. If but 25% is absorbed, of course the dose must be four times the dose really needed. Nothing that Dr. Brown said deserves more, or as much, attention and constant holding in memory every day as his remarks on the hours to give quinine. More quinine is wasted by stringing out the doses into three grain capsules than would supply the Cuban army. This pernicious custom is a surrender to the patient's whim; he must have capsules and must have small capsules. If he will have capsules use the ten grain size. Ten grains every eight hours will do more to the germs than two grains every hour, and will not make the patient as nervous. It is doubtful wisdom to give more than three doses of quinine per day in any case unless the absorption is manifestly deficient. Quinine is not eliminated in any great amount in eight hours. So no matter how large or small the daily dose a better effect is to be expected if given but three times a day. No one, not even an infant, ever needs less than five grains at a single dose. For the absorption of quinine in an infant's stomach is so slight as to amount to no more than 10% in some cases. Consequently to give less than five grains is to give none at all, especially if wrapped in a syrup and made more insoluble. The absorptive power of the stomach over quinine increases with age, apparently, in exact ratio to the increase in bodily weight. Hence it will be found that for successful practice in swamp regions the dose of quinine for any child between the ages of one day and eight years is the same, viz., five grains.

Let the physician remember to give his quinine every eight hours, and let him remember that the dose is "enough," and "slow fever" will be a thing of the past. And let no man contradict this statement until he has faithfully tried the plan of treatment and failed.

MEDICAL SOCIETIES.

We may venture to assert that the medical profession is the only one among the professions which has scrupulously guarded itself against becoming a trade. This is shown best by the fact that there are medical societies in every city throughout the country, the members of which meet regularly for no other purpose than to deliberate on the science of medicine and the art of surgery, they are prompted by an avowed, love for their vocation and for medical science as science, and for medical art as art. This is creditable enough and ought to be spoken of with pride. But it is somewhat curious that at the samet ime, along with this fine interest and professional asperation the average session of a medical society has a certain traditional tone, not very different from the tone of the sedate meetings of the "old school." Our recent times have been acknowledgedly revolutionary in nearly all the departments of medicine, and we may safely say, even cardinal doctrine of the science; but you see no trace of that in our regular medical society evenings. There was a time when physicians thought they were performing a professional duty of a order when they submitted some curious case or specimen; they seem to have had the hope that they would startle the brethren. Survivals of this mediæval innocence can still be met with in other than in rural places. When the specialists began to come forward, there was an advance in the profession, but also a refreshing change in the sessions of societies. It is true, these specialties began to preoccupy attention and were not unwilling to regulate the minor lights of general practice to the gratifying business of staring at the wonders they recounted about themselves. They are dangerously near to monopolizing the attention of the average local society. Learned specialists and surgeons who have dexteriously pierced into the bowels of mystery are, of course, members to be proud of. But we confess we have often felt a mild resentment at their domination in the professional discussions. For we modestly depone, general practitioners to have professional zeal and scientific interests and they too love medicine, and are willing to advance it and are glad if they can do their share toward progress. Specialists treat us to so many surprises and subject us to such an ordeal of downright awe that we cry mercy. Is the poor fellow who has neither hobby nor curios to be doomed to everlasting silence.

A medical society is largely a society of general practitioners, and general practitioners to delight in study and discovery. What a healthful change would come into the work and program of the average medical society, if humble family doctors also were given audience; they may have things to say worth hearing and worth reporting. But we may confess that if general practitioners have not had the ear of their fellow physicians as readily as their brother specialists have it, it is their own fault. Specialists cultivate their chosen territory and

they give splendid example of scientific broad mindedness. They usually are amongst the most progressive in the profession, but general practitioners incline as a rule toward conservatism. Their daily routine is as traditional as it is monotonous. What house-doctor, for instance while attending on patients, has publicly committed himself to consult with pathologists, microscopists and bacteriologists? He will have to awaken to the great possibilities his work has and he will then, when he does, rise to importance not merely in medical societies but also in the profession and art and science.

THE ONE FALLACY WHICH THE PHYSICIAN SHOULD GUARD AGAINST.

There are five fallacies which the logician speaks of into which the average human mind may fall, but the way to reason properly is to make a habit of reasoning well. Possibly the fallacy which is the approbrium medicorum is the fallacy of observation which may be either new observation or real observation; the one leaves out important circumstances while the other distorts what is observed. According to Bain, "non-observation explains the credit given to fortune tellers, to quacks and false maxisms; the favorable cases being noted, and the others forgotten."

How often do we see this latter habit carried to a humorous degree in the laudation of a new remedy for the cure of a certain disease. How often does a physician who suffers from a hobby in the shape of a special drug in the treatment of a disease attribute the cure to this, or to that special drug, when most diseases are in their nature self limited. How often does he give a dozen different drugs all at the same time and attribute the good effects to only one of them.

Proof embraces one or all of three processes; (1) observation, (2) generalization, (3) deduction. Let us apply these three processes to a celebrated case recited by a noted logician to bring out this fallacy of non-observation or the non-observance of some accompanying circumstance which was the real agent in the cure of such a simple thing as a wound.

In speaking of the "sympathetic powder" of Sir Kenelm Digby, he says, "whenever any wound had been inflicted this powder was applied to the weapon that had inflicted it, which was moreover covered with ointment and dressed two or three times a day. The wound itself in the meantime was directed to be brought together and carefully bound up with clean linen rags, but above all to be let alone for some days at the end of which time the bandages were removed, when the wound was generally found perfectly united. The triumph of the cure was decreed to the mysterious agency of the sympathetic powder which had been so assiduously applied to the weapon.

It is needless to say that in this case that the promptness of the cure depended upon the circumstance of the exclusion of septic germs from the wound, and the healing properties of blood serum.

INDISCRIMINATE USE OF SEDATIVES AND ANODYNES.

Into every niche of civilization has crept a demand for a legitimate means of relief from the mysterious local conditions and constitutional effects of the enormous expenditure of nerve force, entailed upon humanity by the unfavorable, social and business circumstances of the closing years of this century. No incontrovertible evidence is necessary to convince one that aside from inherited constitutional tendency there are causes existing to day, which unmistakably produce a desire for relief from innervation of the sympathetic nervous system, with consequent vitiation of results.

Too readily and unconciously have physicians sought to subserve the ends of nature by the amelioration of symptoms for the time being without proper treatment for permanent results, and above all strict injunctions as to absolute rest.

Easily learning the individual susceptibility of each patient for such drugs as morphia, cocaine, atropine, and the coal tar derivatives; the patients desire and entreaties for instant relief from headache, loss of sleep, effects of a nights dissipation, or over-work, leaves the physician no alternative but to refuse and loose a patient or resort to the use of one of the medicaments mentioned. The patient is met no more, professionally until the demands of nature for rest, drive him again, to seek the soothing influence of the seductive drug; and thus the practitioner unconsciously lures the victim on to the indiscriminate use of these remedies and certain self-destruction.

Whether from invitation, temptation or curiosity, or the relief of pain, no one of the drugs mentioned has equalled the rapidity with which cocaine has fastened its deadly fangs upon humanity.

Place yourself in the position of a man, once strong, mentally and physically hard-working and with a family dependent upon you, and awaken to a realization of the gradual failure of the God given faculties

of mind and body, and solemnly resolve that you will hereafter guard yourself against the indiscriminate use of remedies, for the relief of pain and nervous strain, with to say the least, their undesirable and deleterious results. Use them when absolutely necessary, but use them with judgment and discrimination.

THE HURRIED AND CARELESS EXAMINATION OF PATIENTS.

Physicians, with large practices and the greed of gain, are very apt to become careless in more ways than one. That one who has a large and lucrative calling in any sphere of life should become indifferent toward his patrons seems absurb; merchants and other business men do not usually encourage any of their clerks, nor do they themselves shun their clients when their establishments grow to be of vast importance in the community. Should not the same rule apply to physicians? we think more so, from the fact that a Doctor's calling is far beyond and above that of many others, and the physician should conduct his affairs with very much more exactness than any of those mentioned.

We are often told by patients, who have had a certain Doctor for many years, that "Doctor so and so was at one time a splendid Doctor, but since he has gotten to be busy, he is not worth the room he takes up," being too hurried and careless with his examinations and diagnosis, in fact so much so that they have become disgusted and in consequence have gone elsewhere for treatment. Patients who pay for their medical advice and attendance should receive all the time necessary for their case, no matter how many are waiting to follow them. We have been told of a prominent physician who claims to be able to wait on a patient in one minutes time; any practical physician can, at a glance see that this is impossible, and at the same time do justice to the patient.

Physicians should not forget that their existence depends entirely on their friends and clients, and they should be willing to give them ample services in return for the fees they collect. The passage "it is more blessed to give than to receive" might be here applied and therefore give freely of your services to those who require them, especially if properly renumerated. A patient will think more of a physician who makes a thorough effort to diagnose his ailment, though wrongly so diagnosed, than if hurriedly made and incorrectly at the same time.

All these little things put together accrue to the benefit of us as physicians, and we hope will be more closely followed by our brethren generally.

NONSURGICAL TREATMENT OF CHRONIC INTRAPELVIC INFLAMATION.

Among the many perplexing problems described, discussed and debated, none are more important nor require more therapeutic acumen than the nonsurgical treatment of chronic intra-pelvic inflammation.

A striking proof of the statement is the fact that a majority of the feminine clientele of the general practitioner, especially the multiparæ, are constantly consulting him about symptoms of pathological uncertainty which have usually been treated by many with no permanent relief.

He takes case after case with the hope that from the literature at command may be gleaned the one gem of therapeutic knowledge which may prove of inestimable value.

Reference to the subjective literature only the more prominently emphasises the divergence of opinion, and the innovasions in local and mechanical treatment and visionary therapeutics, which after a fair trial have only proven uncertain, inefficient and disappointing.

Thoroughly disgusted and mentally nauseated he adopts the experimental method of treatment, accepting no statement, unless based upon clinical data of his own.

Observing the physical signs of the case, and the individual peculiarities of his patient he deduces the two items of paramount importance, i. e. rest and depletion.

Rest, physical and functional (sexual), may be secured by putting the woman to bed, or removing from her all care of household or customary duties, and the relief of pain, the remedies par excellence for which being the opiates, handled with discretion and care. Functional rest may be secured by the use of the medicated tampon, except during menstruation, and it may be incidentally mentioned, that a combination of calendula, boracic acid, and alum, used in proper strength with the tampon, will materially aid in the depletion, as well as act as an admirable antiseptic.

Depletion and the removal of surplus excrementitous matters from the system is generally accomplished satisfactorily by the administration of some saline hydragogue cathartic, of which none will prove more beneficial than teaspoonful doses of magnesia sulphate.

Sometimes scarification and cupping may be necessary in the acute attacks.

Correct any gastric disturbance which

may be present and give sodium salicylate a few days to cleanse the blood of uric acid and with proper hygienic attention, resolution will be obtained, the organic destruction checked, the functions will be restored and the patient find health and happiness.

HISTORY OF MEDICINE.

The question is often asked, "Is there any practical results to be derived from the study of the History of Medicine?" It is indeed a question well worthy of our careful consideration, and a thoughtful answer. It can be answered by asking another, "Do we profit more from the successes or failure of others?" While argument in abundance, on either side of the question may be had, yet experience seems to lend the weight of its evidence in favor of the latter, since most of our real success, is the avoidance of old errors.

The History of Medicine is a summary of the great failures, both in theory and practice, and show how we move in a circle; and how, when some great discovery is heralded as the sovereign specific, either as a therapeutic agent itself, or some condition which heretofore baffled all attempts to unravel, is now made clear, we have but to turn back the yellow leaves of time and find that the discovery had been made and remade only to suffer the fate of temporal things, to be discarded as worthless, cast aside and forgotten.

Notwithstanding this, there has been a steady growth from empericism to science, the former more and more being relegated to the background. But of far greater import, the position of the physician himself has become one of eminent authority and respectability, as an element in society in an evolution from Quackery, Occultism and Knavery, which characterized the vast majority of the profession in the early days to the skillful and learned scientist of today.

Ignorance, predjudice, and selfishness are ever the enemies of knowledge and right, and this study is one long series of antagonisms between these contending forces; however, attempt to truly benefit mankind has either failed in its birth, or only after a long fierce conflict, has the right triumphed and as the combatants, flushed with consciousness of victory marshalled their forces together, and overlooked the field, only too frequently to find their well-earned battle to be only an empty honor, or the necessity for the thing itself to have passed away, while the strife was in progress, and all the toil, danger and anguish to have been in vain. On the other hand profiting by these failures, there stand in bold relief, the grand, heroic victories by which our noble art has made great strides forward ever to retreat.

But are these struggles a thing of the past, only to be read and talked about? No! the present teems with them, and each of us, stands ready at any moment to do battle right royally for our beloved profession in its onward progress to the truth.

Let us profit by the example of those who have gone before, who have fought that we might win, who have suffered persecution that we may enjoy the fruits of their labors.

Let us profit by their mistakes, and give to posterity a history of our times, replete with our efforts to place our beloved profession on a higher, a broader and a nobler plane.

THE VALUE OF A POST-GRADUATE COURSE TO THE COUNTRY DOCTOR,

When a physician begins practice, especially if in a small community, he is soon consulted by a number of chronic invalids who have exhausted the remedial resources of the other physicians of the place and perhaps their patience also; and still remain unrelieved. If he cures one or two of them, his success is almost certainly assured and he will soon do his share of the regular work. Every community has its quota of chronic sufferers and many of them are easily relieved, if not entirely cured, by properly applied means, be they medical or surgical. But as physicians commence to grow rich, they are apt to grow less anxious and to lose the enthusiasm which spurred them to better efforts at first and enabled them to relieve this troublesome class of cases. The inevitable result in a re-accumulation of cases beyond his ability to treat successfully. Then is the proper time for him to cease practice for a short period and spend a season in a college for post-graduates. There he will come in contact with men who are active, energetic and progressive. He will see that the profession has been moving rapidly along while he has been plodding in his own way and falling behind. He will hear of the latest advances in medicine and surgery and see them illustrated; he will perform many operations, examine cases, realize the activity of the medical world in its medical centers and the rapid progress it has been making, store his mind with useful information, and all will gain that new impetus which will enable him to resume his work with assurance. On his return home, how differently will his old cases appear to him! Not as irremediable sufferers, but as having

conditions which are amenable to means now in his power to employ. He infuses new confidence into them and brings his best energy to bear upon them. The inevitable result is that he has more work, better results, and better pay. No physician can afford to spend his life in the same unvarying manner, year after year. To his patients as well as to himself, he owes a mental brightening and house-cleaning at certain intervals which is to be accomplished only by spending some time at such an institution as mentioned above. This is more true of the country doctor as there is usually much less association and concerted action between fellow-physicians than in the city. There is again less variety of cases in the country than in the city and unless the country practitioner has special facilities, he must either send an unusual case away or neglect it. The city doctor however, cannot afford to do this so he must keep himself more in touch with the advancement of his profession.

RURAL SANITATION.

At a conference of local health officers, of Maryland, held in Baltimore, in February of this year, stress was laid upon the necessity of carrying the war of sanitation into the rural districts. The stumbling block heretofore in these communities has been the ignorance of the people, relative to general sanitary laws, and an inherent prejudice against innovations of all kinds, especially such as seem even to a slight degree to curtail personal liberties, and regulation of reality.

Town commissioners or councils of corporate villages are frequently lacking in courage, or more detestable still, for fear of political defeat, or on account of local jealousies, these officers fail to give the support necessary to the accomplishment of much needed sanitation, either by not framing the regulations for such an end or the non-enforcement of existing ones.

The danger of infection from communicable diseases, in these sections, was also shown, and the difficulty of stamping out an epidemic, when once established, was demonstrated to be greater in the country than in the city; also the great need of cities to see to it that the best sanitary condition possible of attainment in the country was of vital importance to the cities themselves; as they were directly dependent upon the farmer, in a proplyatic sense, for the maintainence of a proper hygenic condition in the latter, (rural sanitation,) as two great sources of infection would thereby be removed or reduced to a minimum, namely: water and milk supply.

These facts were very clearly set forth in a paper read by Dr. J. H. McCormick, of Washington, D. C., (published by the Maryland Medical Journal, March 27th, vol. xxxvi. 23,) entitled, "A sanitary survey of towns and villages for the prevention of typhoid fever," and some practical suggestions and recommendations were made as to the best and simplest method for the detection, prevention, and extermination of infectious diseases as illustrated by typhoid fever.

THE LESSON OF THE HOUR.

It is apparent that this closing decade of the 19th century is to be for medicine a history making era. Scientific observers are at work. New ideas dominate the profession. Antagonistic theories are promulgated. Conflicts of opinion and heated and sometimes acrimonious discussions are the order of the day. Never before has the practice of medicine been in so chaotic a a state. Never before has there been more urgent need of a comprehensive answer to the proverbial question, "when Doctors disagree, who shall decide." Who, indeed, but the Doctor himself—the general practitioner—the intelligence of the great mass of the profession.

Consider how at variance are the different methods of treating the three most common and most fatal of the acute specific infection—pneumonia, diptheria, and typhoid fever. At least three different and widely divergent plans of dealing with each of these three enemies of man are before us and each one is supported by honest and enthusiastic advocates. Each one, no doubt, is possessed of certain advantages but there can be but one right way to treat any patient in the way that will conduct him by the shortest road, through the less danger, to the most perfect health, and that way (the method which can produce this result) can only be established by the careful observations of a host of physicians who have carefully and honestly recorded the facts in a vast number of cases.

Therefore, for the good of humanity and in the interest of the profession, the Journal urges its readers to exert themselves to deal thoroughly with these diseases by whatever method they may select—to read carefully all that has been written upon the plan and to follow the directions that have been given on the subject by the best known authority. No other course can be fair to the method—no other course can be just to the patient and unless these directions are

followed in the most minute degree no data that may be presented will be of value.

The clinical diagnosis should be verified bacteriologically or by the serum test of Pfeiffer and Widal. Every essential feature of every case should be recorded on a clinical chart, which should show the age, and occupation of the patient, the day of the month and the day of the disease upon which the treatment was commenced, every complication (including pregnancy) should be noted as well as all relapses and sequelae. The date of the appearance and the disappearance of every symptom should be indicated. The temperature variations, the pulse beat, the number of respirations the number of the movements of the bowels, the kind and the quantity of the medicine that has been given and the result of its exhibition should be shown. Such charts would be invaluable to the physician in charge and to the profession at large. They are easily kept—they require the smallest possible outlay of time and energy, even when no trained nurse is in attendance and the whole duty of keeping these records devolves upon the physician.

They impress the patient and his friends with the knowledge that their invalids is receiving careful attention; they enable the physician to see at a glance a complete history of the case, the treatment that has been given and the effect thereof and they are most valuable records for future reference.

The lesson of the hour, then, in this transition state of the science of medicine is for every progressive physician to become an original observer and to keep accurate records of his observations. They cannot but promise his patient's interest and they may redound to his own future fame and honour. They may be made to do a nobler work. By classifying and publishing these clinical records, they will aid in establishing correct methods of practice and in promoting the honour and dignity of the profession and thus securing honourable mention of American physicians in this history making era of medicine.

MEDICAL PROGRESS.

Medical science has achieved notable discoveries in such quick succession that no physician with a sense of responsibility can be blamed, if he resists the temptations and withdraws himself from doubtful facinations. But there are certain things which a physician who is conscious of his duties cannot afford to ignore. For modern medical science has manifestly achieved some certain results, and to these no one can any longer shut his eyes with immunity. A great fact, for instance, of peremptory interest to practitioners, is the fact that microscopical and bacteriological examinations are helpful and sometimes necessary aids toward an acurate diagnosis. He must be hopelessly conservative who would not be willing to admit that. And still it appears that only those have so far appreciated this central axiom of the present school of medical thought, who have an abstract, a pedantic interest in it. Practitioners stand at the distance and seem to forget that what is proved to be true as a scientific fact, must be essential in scientific service. No practitioner will deny that bacteriology has a legitimate standing in medicine as much as has biology. And still many reputable physicians are slow to recognize that it has substantial contributions to make in professional practice. And even if the abstract claims of the new sub-science are admitted, they are slow to recognize it in the diagnostic determination of a certain patient and of a specific case. But this is plainly scientific skepticism and is unworthy of one who wishes to have ligitimate standing in the profession. While orthodoxy may be a safe doctrine, elsewhere, in medicine it is heresy and almost treason.

DR. HUGO ENGEL.

We regret to chronicle the death of Dr. Hugo Engel, of Philadelphia, on April 5th. Dr. Engel was 52 years of age, and his death was due to pneumonia. He was formerly connected with the teaching staff of Jefferson Medical College, of which he was an alumnus, and at one time occupied the chair of nervous diseases in the Medico-Surgical College of Philadelphia. Dr. Engel was a versatile writer of ability. He frequently contributed articles of originality and merit to the columns of this Journal and we extend our sympathies to the bereaved.

We feel inclined to reaffirm the old saying of "small favors thankfully received," when we read in the papers a few days since that the legislature of North Carolina had reduced the obnoxious doctors tax from ten to five dollars per year. This is some improvement, but the principle involved remains the same.

Sir Joseph Lister has been raised to the peerage and is now Lord Lister. The new blood which finds its way into the peerage from year to year is all that saves it from annihilation.

BOOK REVIEWS.

Diseases of the Ear, Nose, and Throat and their Accessory Cavities. A Condensed Text-book. By Seth Scott Bishop, M.D., LL.D., Professor in the Chicago Post-Graduate Medical School and Hospital: Surgeon to the Illinois Charitable Eye and Ear Infirmary: Consulting Surgeon to the Illinois Masonic Orphans' Home and to the Silver Cross Hospital of Joliet: Formerly Surgeon to the South-Sid) Free Dispensary and to the West-Side Free Dispensary: Member of the International Medical Congress, 6The Pan-American Medical Congress, The American Medical Association, The State Medical Societies of Illinois and Wisconsin, The Chicago Pathological Society, etc. Illustrated with 100 Colored Lithographs and 1 8 Additional Illustrations. One Volume, Royal Octovo, pages xvi-496. Extra Cloth, $4.00, net: Sheep or Half Russia, $5.00, net. The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street, Philadelphia: 117 W. Forty-Second Street, New York: 9 Lakeside Ruildiug, Chicago.

The matter of this work is arranged in four divisions which treat respectively of the principal sub-divisions of the subject. The author is a were known writer, a physician of large experience, and he has produced a book that will help the student in preparing for his degree; will aid those progressive practitioners who wish to acquire the proficiency necessary to properly treat those patients who are unable to visit specialist; and those who are gradually exchanging the general practice for special work in these branches. There is a distinctly original flavor about this book that constitutes its highest recommendation. It is essentially practical and clinical in arrangement and execution. Viewed from the standpoint of the medical student and practitioner, it presents a happy medium between bare outlines and exhaustive treatises on this subject. The author has fine descriptive power. The many illustrations which are designed to elucidate the whys and wherefores serve their purpose admirably. This is probably the only available work containing the latest developments concerning diphtheria, blood serum therapy, the medical and surgical management of mastoid diseases, the most successful treatment of hay fever, the improved compressed air instruments, Vaporising apparatus, inhalents, &c., &c., consequently these subjects have been given special prominence. The compact volume is well adapted as a text book for our schools. The different chapters are written with the utmost clearness consistent with the intricacies of this subject. Taken as a whole the work appears to be just what the average medical requires and desires in this department.

The International Medical Annual and Practitioner's Index. A work of Reference for Medical Practitioners, by various European and American contributors. 724 pages, and numerous full page plates and engravings. Fifteenth year. Price in cloth, $2.75. E. B. Treat, Publisher, 243 West 23d St. New York City, 1897.

We have before thus expressed our admiration of this annual and our surprise at its comprehensiveness. This the fifteenth year of this well known work presents the admirable features of its predecessors, and it deserves the large patronage that has been accorded it during the past five years. While the book is condensed very carefully yet it is sufficiently explicit to give a clear idea of every subject presented. Part I consides the Dictionary of New Remedies occupying 93 pages. Part II, which is by far the greater portion of the bork is devoted to new treatment. The remaining portion is devoted to Sanitary Sciences, practical sanitation, etc.

The arrangement of the work is alphabetical, and with its complete index, makes it a reference book of rare worth.

In short, the "Annual" is what is claims to be—a recapitulation of the year's progress in medicine, serving to keep the practitioner abreast of the times with reference to the medical literature of the world. Price remains the same, $2.75.

Autoscopy of the Larynx and the Trachea. (Direct Examination Without Mirror.) By Alfred Kirstein, M.D., Berlin. Authorized Translation (Altered, Enlarged, and Revised by the Author) by Max Thorner. A. M., M.D, Cincinnati, O., Professor of Clinical Laryngology and Otology, Cincinnati College of Medicine and Surgery: Laryngologist and Aurist, Cincinnati Hospital, etc. With Twelve Illustrations. One Volume, Crown Octavo, pages xi-68. Extra Cloth, 75 cents, net. The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street, Philadelphia: 117 W. Forty-Second Street, New York: 9 Lakeside Building, Chicago.

This work deviates from time-honorred tradition, and opens up an entirely new way for the examination and treatment of the larynx and trachea, by teaching that we can view the interior of the air-passages directly, without the aid of optical appliances, and operate with straight instruments in the same manner. The little book is exceedingly interesting and well illustrated. The author wishes it distinctly understood that his method is not intended to

replace the laryngocopic method, but to add to it.

International Clinics. Edited by Judson Daland, M. D., J. Mitchell Bruce, M. D., F. R. C. P., David W. Finlay, F. R. C. P. Vol. I, Seventh Series, 1897. J. B. Lippincott Co., Philadelphia.

All that is necessary in reviewing this volume is simply to announce that it is ready for sale. One always look forward with a great deal of pleasure to the publication of this "Quarterly of Clinical Lectures" on Medicine, Neurology, Pediatrics, Surgery, Genito-urinary Surgery, Gynæcology, Ophthalmology, Larangology, Otology and Dermatology, by professors and lecturers in the leading medical colleges of the United States, Germany, France, Great Britain and Canada, for they are always full of fresh and useful information. This, the first volume of the seventh series maintains its high pre-eminence as periodicals of great use to the practitioner. This volume contains 43 lectures from persons upon subjects of their own selection, of which they are most familiar, thus making them of infinite value to physicians. This volume contains many excellent illustrations, and forms an attractive as well as a useful contribution to medical literature.

A Clinical, Pathological and Experimental Study of Fracture of the Lower End of Radus by John B. Roberts, A. M., M. D. Philadelphia: P, Blakiston, Son & Co. 1012 Walnut Street. 1897.

Fracture of the lower end of the radius is one of the most frequently broken bones in the body. Improper treatment of a fracture of this kind often results in ugly deformities with partial loss of use of hand. This work contains 76 full pages treating of this subject. It is well illustratad. The print is fine. The treatment of Colles fracture consists in immediate and complete reduction of the fracture, followed by a retentive dressing which will not interfere with the free use of the fingers. The deformity must be overcome even if great force is necessary to put the fragnents in normal position.

The price of the book is $1.00

Organ Diseases of Women, and Sterility considered as curable by Medicines by J. Compton Burnett, M. D., Philadelphia: Boericke & Tafel, 1897.

The principle idea conveyed in this little book is, that Enlargements and Displacements of the uterus can be greatly relieved and often times cured by medicines. This is quite a hold position, nevertheless his argument is good and worthy of reading.

Warner's Pocket Medical Dictionary of Today, 10,000 words. Wm. R. Warner.

This little dictionrry contains 10,000 words and is a concise work, yet perfectly comprehensive. A very complete list of medical terms is presented as in vogue at the date of publication.

Transactions of the Medical Association of Georgia. Forty-Seventh Annual Session, 1896, Atlanta, Ga.

We tender our thanks to Dr. R. H. Taylor for sending us these transactions. We find in them a great deal of useful and valuable information. The style and manner in which they appear reflect must credit on the association.

Transactions of the Kentucky State Medical Society New Series: Vol. v, forty-first annual meeting, held at Lebanon, June 10, 11, and 12, 1897.

These transactions are nicely gotten up making a neat and valuable volume. Steele Bailey, M. D., is Secretary.

LITERARY NOTES.

Lippincott's Magazine for May, 1897.—The complete novel in the May issue of Lippincott's is "Jason Hildreth's Identity." It is a story of unusual originality and power, turning on an incident which has had precedents in real life, the loss of memory and personal identity; but the plot is so deeply and skilfully laid that the last pages will come as a surprise to almost every reader.

"A Star Route Case," by Mary E. Stickney, is a tale of old days in the West, when mail coaches were "held up" by agents of their owners. "Marthy's Dress," by Carrie Blake Morgan, is a pathetic and effective piece of work by one who never, in prose or verse, writes otherwise than well.

Joseph A. Altsheler, in "My Pennsylvanian," deals humorously with a supposed incident of the Revolutionary War. William Thomson revives old memories of Indian-fighting "On the Santa Fe Trail." In his narratives the savages are always punished, and the whites come off safe.

Alva Fitzpatrick traces the fortunes of certain "French Pioneers in America," i. e., Napoleonic exiles who came to Alabama after the downfall of the empire. It is curious by-chapter of southern annals. Mrs. Schuyler Van Rensselaer writes of the "Beginning of Liberty in New York," questioning some assertions of Mr. S. G. Fisher.

"Life in the Cotton Belt" is described

with full knowledge by Francis Albert Doughty, and "Early Man in America," a more remote but not less interesting theme, by Harvey B. Bashore.

Dora E. W. Spratt gives some facts as to "Earning a Living in China." "Some Bird-songs" are reproduced, with musical illustrations, by Henry Oldys. In "Hard Times Among the Heroines," Eva A. Madden, in lively vein, imagines how different Jane Eyre, Becky Sharp, and other notables of fiction might have been if more liberally provided for.

The poetry of the number is by Aarrison S. Morris and Clarence Urmy.

Socialism in France. M. Georges Clemenceau, in the May Forum.—Nothing is so characteristic of the present regime in France as the disproportion between the hopes it suggests to the French mind and the realities with which it pays such splendid promises. The incapacity to bring about the most timid fiscal reform in a country burdened with the heaviest debt and the most incoherent system of taxation is enough to doom to disappointment in advance all hopes of social reforms. Perhaps it would be unfair to throw on the government of the bourgeoisie the exclusive responsibility for this state of things. It is true that no impulse toward reform has ever come from them, and that they have shown themselves as curiously incapable of directing the country in an evolution of peaceful liberty as the ancienne noblesse. It must be admitted, however, that the country itself, while it expects that the abuses of routine, which it tolerates with no adequate protest, will bring about those ill-ordered movements of opinion that are in the traditions of France, appears quite unable to impose on the government a systematic effort toward reformatory action. This mental situation throws a certain vivid light on the present state of socialists thought the action in France.

An Old and Well-Tried Friend.—The Youth's Companion will celebrate its seventy-first birthday in 1897. Among the attractive announcements of the paper for the coming year is an article by Mr. Andrew Carnegie on "The Habit of Thrift." Successful men in other walks of life will second Mr. Carnegie's paper with readable practical articles. The non-partisan editorials, the "Current Events" and "Nature and Science" departments are of special benefit to those who wish to keep informed of the world's progress. Of course there will be the usual high-class fiction. New subscribers who send $1.75 to The Companion will not only receive the paper for a year, but will receive free a very beautiful Calendar, printed in twelve colors. The illurstrated Prospectus of the next volume may be had by addressing

The Youth's Companion,
205 Columbus Ave., Boston, Mass.

Clinical Notes in Hysterectomy.

Published in the March number of the Journal of Orificial Surgery, is an article of much interest, under the above caption, in which the writer W. E. Green, M. D., Little Rock, Ark., dwells upon the beneficial results of hysterectomy, its expediency, the comparative merits of the different methods, &c., from which the following synopsis is taken.

"Many competent operators adhere to the vaginal, except in large Myomata, while others equally prominent and conscientious, advocate the abdominal method. While in a way both are correct, from a practical point both are wrong. In order to accomplish the greatest perfection in results, a proper classification of the pathological conditions should be made. The abdominal method should receive the preference in the removal of large Myomata. When large complicating cysts exist and where extensive visceral adhesions are suspected. On the other hand, malignant diseases of the cervix, prolapsus, versions and other conditions in which the organ is not unduly enlarged, requiring the removal of the uterus or the uterus and the appendages, the vaginal route should be chosen."

Some of the pathological demands for the operation of hysterectomy and the clinical features of its execution are then illustrated by the recital of four cases.

Case 1.—Reflex Neurosis.—Patient, mother of four children; had been an invalid for four yerrs. Had extensive laceration of cervix, complete rupture of perineum and cystically enlarged ovaries, much pelvic tenderness, and suffers from great nervousness, servere stomatitis (nursing sore mouth) nausea and diarrhœa. Hysteroophoro-salpingectomy was performed by the vaginal route. Fourteen days thereafter the perineum was repaired. Recovery prompt and patient completely restored to health.

Case 2.—Carcinoma of Cervix.—hystero-oophoro-salpingectomy.—patient aet., 62; weak and anæmic; vagina greatly contracted; large area of vaginal mucous membrane involved, perineum was divided down to sphincter ani muscle and vagino-rectal septum split up to the cervix. Uterus, ovaries

and tubes, and large section of the vagina removed, peritoneal and vaginal opening closed without drainage. Vaginal and perineal wound closed by deep buried and superficial sutures. Recovery rapid and satisfactory.

Case 3.—Large Uterine Cystic Myofibroma.—Abdominal Hysterectomy.—Patient aet., 28; nullipara. Abdomen distended to size of full term pregnancy, causing complete disablement. The growth was removed by the Kelly method, viz., abdomen opened by long incision both ovarian arteries ligated with No. 2 sheep-gut sutures at outer extremity. After which, large forcep was placed upon either side the broad ligament near the uterus. Then beginning on the left side, the broad ligament was divided down to the utero-vesical junction; all bleeding vessels being caught with hemostatic forceps when severed. The incision was now carried across the front of the uterus to a corresponding point on the opposite side, dividing the capsule only. This peritoneal flap was then dissected down almost to cervico-vaginal junction, separating the bladder from the anterior uterine walls. A like incision was made around the posterior aspect of the uterus, joining the first incision at either side and the flap dissected back in the same manner, releasing the utero-rectal attachments. The cervix was now cut across and the incision continued upwards, severing the broad ligament on the opposite side entirely freeing the uterus from all its attachments. All the vessels were ligated after which, the cut surfaces of the broad ligament and the cervical stump were covered with peritoneum by means of a continuous sheep-gut suture. Abdomen was then closed, patient made a rapid and satisfactory recovery.

Case 4.—Large Fibro-myoma, accompanied with Chronic Chorea, Severe Nervous Symptoms and much Mental Disturbances.—Miss, aet., 27; large and fleshy; had been ailing for two years or more; tumor weighed eight pounds. Removed in same manner as previous case. Recovery uneventful. Her nervous symptoms subsided; chorea rapidly disappeared and mental trouble cleared up entirely.

Laxity of the Ligaments with Congenital Hip Luxation.

At the recent meeting of the American Orthopedic Association in Washington, a paper with above title was read by Dr. Henry Ling Taylor of New York. The author stated that the causes of congenital hip luxation usually given, were trauma at or before birth, and anomalies of development of the bones forming the joint, which might be related to malpositions of the fœtal limbs, deficiency of the amniotic fluid, or precocious or retarded ossification. Undoubtedly there were several groups of cases with differentcausation. That the defect might not be confined to the hip-joint, was shown by the author's examination of a pelvis from a subject with bilateral congenital dislocation of the hips, which was imperfectly developed through, parts of the ilia being of eggshell thinness, and the arches of the sacral vertebræ being incomplete. Prof. Wolff, of Berlin, had pointed out, in a case of multiple congenital dislocations reported by him, in which nearly all the joints of the body, even those not dislocated, showed excessive mobility, that the ligamentous structures about the joints were in this instance, primarily at fault, and that this would probably be found to be the case in a certain number of cases of congenital dislocation. Taking this hint the reader of the paper had tested the mobility of the various joints in cases of congenital hip luxation presenting for examination, and in two instances, in girls of four and nine years, the former with bilateral, the latter wth unilateral displacement of the ordinary type, he had found great laxity of the ligaments of most of the joints of the limbs, evidenced by extreme mobility and hyperextensibility; the fingers and toes for example could with little effort be made to touch the back of the hand or foot respectively. There was also considerable lateral motion at some of the hinge joints. The author knew of a similar case in the practice of a surgical friend, and it seemed to him that a congenital tenuity, elongation or defect of the ligamentous structures of the joints must be recognized, and that this condition was probably the essential causative factor in a certain number of cases of congenital luxation.

Some Don'ts and Some Do's in the Management of Sick Children.

The April number of the "Mississippi Medical Record" contains a very interesting article by Dr, P. W. Rowland of Coffeeville, Miss., on "Some Don'ts and Some Do's in the management of Sick Children." He says that in order to be successful in the management of sick children the physician must not lose sight of the importance of being thoroughly in touch with the little patient, his habits, his desires, his disposition, &c. That in his association with them, his life should be such as to inspire the children with the deepest respect for him as a man. Thus gaining their confidence and love, without which he will

be seriously han-dicapped in his treatment of their diseases.

Our children are "like wax to receive impressions, but like clay to retain them," and the physician who, in his daily association with them, does not recognize this truth is a failure, not only in his conception of what must be his duty as a conscintious physician, but in his application of remedies to their relief as well. He deplores the fact that our children should have such a dread of the doctor, and that in their conception of his character, he goes about with his big pills, and his sharp knife, seeking every innocent to destroy. The blame for all this is attributed to the mothers; the habit of scaring the child into obedience with a threat of the doctor's presence, &c. Mothers must be taught to impress upon their children the family phpsician is, next to mother and father, their best friend, gentle and kind, sympathizing with him in all their doings, ready and anxious to relieve their sufferings. Attention is called to the importance of being thorough in diagnosis; that nature more clearly points out the way to the cure of diseases in children than in adults; that they are less liable to complication, hence more easily understood and treated. The writer is also careful to give attention to the importance of a clear understanding of the digestive troubles that arise in nursing babies, preferring to call them "deviations from the normal condition" rather than diseases. He says these trouble should be corrected by giving attention to the milk supply, and not by the use of drugs. He condemns the fly blister in the respiratory trouble of children, prefering continuous irritation by a salve of mustard on absorbent lint, applied to the chest.

"Causes of Some Pathological Conditions as Puberty."

An article on this most important subject appeared in a late number of the Journal of Orificial Surgery. The writer, Doctor Julia Holmes Smith of Chicago believes with other investigators that "abnormal habitudes propagate themselves hereditarily," and that a man not only yields to the tyrany of his own organization, and environment, but may fall a victim to his grand-father's excesses. While each period of life seems fecund of disease, the writer claims that latent tuberculosis, chorea, epilepsy, etc., etc., are most likely to manifest themselves at puberty and during adolescence because at this period the sexual apparatus is taxing the storehouse of the system for a larger share of vital force. To qoute Clorcston "the whole trophic and mental energy has been occupied before puberty in acquisition alone." At this critical period in physical and physiological evolution, a new function is brought into action, and there is an awakening to intense activity of fast tracts of brain tissue which have heretofore been dormant—what wonder then if hereditary weakness of certain cells manifest itself, and the youth begin to go down hill instead of joyously entering into the kingdom of health. The writer answers the question of where then is our possible refuge from evil heritage? in this wise:

It is found in our modern scheme of preventive medication, our new evanegel of orificial philosophy, for if the conditions of life are made favorable mere tendencies need never develop, mere potentialities need never become actualities.

The article closes with the following suggestions.

1. The sexual organs of the newly born should be examined, and any inpecfection remedied before the accorechuer leaves the lying in chamber, that no imprisoned and irriable nerve fibres may reach upon the the whole orgamism through the sympathetic system.

2. If possible after securing the family history, the proper regimen for childhood should be prescribed, diet and exercise, bathing and sleeping all considered.

3. The parent should be instructed as to the importance of preparing wisely the maturing child for the changes to be expected at puberty, the sacred meaning of these chances and the possible danger of reckless ness at that time, and finally the family Doctor should warn against the danger of over mental stimulation. Give the children a fair chance—abort before puberty so far as possible all inherited evil tendencies, and give the youth a chance to come into manhood or womanhood in the enjoyment of health of body and mind, so attaining the crown of life.

Imperial Granum.

A prominent Vermont physician writing to thank The Imperial Granum Company for copies of their famous Clinical record, adds the following convincing words as to the merits of their product as a food for children: "I can show a baby that has been reared on —Imperial Granum—after trying numerous other foods until he was reduced to a mere skeleton—that is now as tough and strong a boy of fourteen months as can be found anywhere."

Sanitation in our Public Schools.

At the annual meeting of the Iowa State Medical Society, held at Marshalltown, Ia., May 19–21, 1897, Dr. Frederic S. Thomas, of Council Bluffs, read an interesting paper entitled "Sanitation in our Public Schools."

He began by saying the subject was a neglected one, and that it was not unnatural that we should concern ourselves regarding the school environment of our children, since they are beyond our immediate control when there.

He regarded the establishment of a chair on State medicine in high class medical colleges as a step in the right direction, and thought our normal schools should make "sanitary science a part of their college curriculum."

The school house should be hygienically located, and beauty of design should in all cases be subordinate to the demand for sunlight. The heating and ventilating of schools is a matter which is rightly done requires much ingenuity.

To properly ventillate, and at the same time maintain a steady temperature isa problem that must yet have much attention.

The eyesight of school children is another interesting question. "The amount of light, the arrangement of desks, the color of the walls, the number of hours of close visual toil and the size and form of letters in our text books, are factors in the development of myopia."

A proper system of sewerage in every school building should be demanded.

He said that while it was sure nervous diseases were on the increase it was not so certain that our modern methods of education were alone responsible therefor. The ambition of the pupil and his parents is more often to blame. The unfortunately brilliant pupils are often stimulated to make efforts which their physical condition does not warrant.

This should not be allowed. No plan has been adopted to ascertain the child's capabilities. All are asked to do the same work. This is a mistaken method of our present educational system.

Some are put in school at too early an age, and almost all the younger pupils are too long confined continuously to the school room. Not more than an hour's continuous study should be given any child under the age of 12.

"In educating the young we assume responsibilities momentous alike to the child, the State and the nation."

We must, therefore, do each his duty toward the solving of these numerous problems in the correct education of our youth in the public schools.

Longevity.

The April issue of the "Medical Brief" has an article on Longevity, written by Dr. Robt. Dalton, of Tacoma, Wash., which treats the subject physiologically and seems to advance some ideas interesting to all who aspire to the enjoyment of long life. Improvement of diet and the progress of hygiene generally, within the closing century, have contributed so much to the health and comfort of the human race that, in the opinion of the writer, life has been prolonged, and, therefore, should stand as limited to 80 instead 70 years. Yet he regards the age of 70 as critical, inasmuch as a great majority of people ignorantly suppose that it safe to practice habits of indulgence usual in youth and early manhood, and he contends that this error is the chief factor leading to death among men bordering on the age of 70 years.

He suggests that as long as the system is building up to maturity from childhood to middle age, there is little danger from excess of pabulum, as the demands of growth and the energy of digestion at that period are amply sufficient to obviate injury; but when growth ceases, the same amount of nourishment, if continued, must certainly result in a surplus, which failing to be digested or appropriated, is very likely, sooner or later, to breed disease. And when we consider that energy of the functions is more or less impaired as age advances, we must admit that any such indulgence is at the risk of health. Hence whatever may have been earlier habits, temperance becomes absolutely necessary during the latter stages of life. The allusion to reports of death by heart-failure, so common at the present time, is pointedly suggestive of a more careful diagnosis, the failure of other organs less conspicuous being frequently the cause.

The habit of constipation is merely alluded to as a condition evidently leading to autoinfection, the actual cause of many fatal chronic disorders overlooked by authors.

Having bestowed due credit on heredity as a boon to longevity, and touched upon the importance of special exercise, friction of the surface, &c., the article closes with the following brief exhortation:

"After all that has been or can be said in regard to longevity, all plausible theories seem to be based on a few simple premises: Obey the laws of nature and "make hay while the sun shines," and then when enough hay is made, turn to the cultivation of another crop of no less value and more genuine pleasure—a labor so easy that every effort is a delight and brings you in closer affinity with Nature's God. Learn while you live and know all you can as you go

passing down the steep end of your time, and you may trust the future to Him who made you. An old man dwelling on the past, blind to the present, and doubtful of the future, is a living nonentity—a paradox.

Influence of Disease on the Nasal Accessory Sinuses on the Eye.

M. F. Patterson, M. D., of Des Moines, Iowa, read a paper with this title before the recent meeting of the Iowa State Medical Society.

Late investigations demonstrate that the nasal accessory sinuses are extensively involved in acute general diseases. Frankel, of Hamburg, reports 63 instances in which there was involvement of one or more of the accessory sinuses from 146 unselected autopsies. Pneumonia, cerebro-spinal meningitis and peritonitis were the principal diseases that caused the sinus involvement.

Other writers also mention measles, whooping cough, scarlet fever and la grippe as predisposing causes of sinus inflammations.

Acute sinus inflammations do not cause as serious eye complications as the chronic, but it has been estimated by several writers that about one out of every ten of the acute cases become chronic.

The best sign of sinus empyema, is pus in the nasal cavities. If pus is in the anterior portion of the nose, it would indicate that it came either from the maxillary frontal or anterior ethmoidal cavities. Pus from the sphenoidal and posterior ethmoidal cavities is discharged posteriorally into the superior nasal fossa and goes into the pharynx. In maxillary disease there is usually a feeling of fullness and weight below the orbit. There may be a severe supra-orbital neuralgia, with more or less pain in the eye-ball and orbit. These neuralgic conditions are not confined to the maxillary involvement, as they may be even more severe in frontal and ethmoidal diseases. With maxillary involvement there is usually infra-orbital œdema involving the lower eye lid; where this condition is found, frontal and ethmoidal troubles can be excluded, as in these diseases if any eye complications, both lids are usually œdematous, and if only the upper lid, frontal disease is probable.

In maxillary, frontal and ethmoidal disease we often get exopthalmic and double vision due to pressure on or necrosis of the bone plates separating these cavities from the orbit. This same pressure may be sufficient to interfere with the functions of the optic nerve. The first symptom of ethmoid inflammation is a tight feeling at the root of the nose, and the patient will complain of a "cold in the head."

In diseases of the sphenoid, a severe headache is the main symptom complained of. Necrosis of the sinus walls causes meningitis and brain abscesses as well as eye complications. Dilatation of the sphenoid sinuses causes various eye complications due to pressure on the neighboring vessels and nerves. Pressure on the optic nerve causes neuritis and atrophy; on the third, fourth and sixth nerves causes paralysis of the ocular muscles they supply; on the opthalmic vein causes œdema of the eye lids and orbit.

These eye complications are no doubt caused by chronic sphenoid diseases. I also believe that we sometimes get the same complications in acute sphenoid empyema, but when the general disease has run its course the nasal stenosis is oftentimes relieved and drainage of the sphenoid is established, but not until some permanent damage is done to the eye as optic neuritis followed by atrophy.

Suppurative Inflammation of the Frontal Sinuses.

The paper on this subject presented by Dr. F. E. Sampson, of Creston, Iowa, to the Western Ophthalmological, Otological, Laryngological and Rhinological Association, was a strong plea for the open form of operation as against all others.

The writer mentions that only lately are the accessory sinuses receiving sufficient attention. Possibly a reason for this is that the frontal sinus is spoken of as a well drained cavity. The writer cites the uterus as a similarly drained cavity.

Certainly the proximity of the frontal sinus to the brain should cause us to look with suspicion upon all suppuration here.

"The study of suppurative lesions of the nose and of the ear with their accessory cavities is throwing light upon the etiology of encephalitis, as the study of the vermiform appendix has elucidated peritonitis."

He mentions the constant menace of the ethmoid cells and maxillary sinus by an infected frontal.

Trans-illumination was critically handled.

Treating of operations many objections could be urged against the intra-nasal route. The anomalies are so frequent, and the disasters reported, so grave, one may well be afraid of this method of operation. Indeed, when successful, this only gives drainage and possibly enables us to medicate the cavity. The cases that can be catheterized without force will, in my opinion, get along fully as well without. When force is used the operation is painful and likely to need

frequent repetition. It does not give us exact information as to the contents of the cavity. It may be the means of infecting a neoplasm which has given us the pressure symptoms and the trans-illumination, shadow of empyema, and possibly delay the recognition of conditions that should receive prompt and radical attention.

These conditions, along with the doubts that must arise as to the accuracy of diagnosis, leads me to that where operative interference is indicated. Opening through the anterior wall is to be preferred, and an opening of sufficient size to permit free exploration.

Hypnotism.

There is no subject connected with medicine that is as much neglected as is hypnotism.

Physicians knowing exactly how much to expect from hypnotism are of the fewest. On one hand we have the enthusiasts who claim to cure all ills by suggestion, as well as to raise blisters and make hair grow and who desire no anesthesia but hypnosis. On the other hand are the bulk of the profession who know just as much about the practical use of hypnotism as do their lay neighbors. They have all read newspaper exaggerations and pseudo-descriptions and are firm in their faith that the whole thing is a fraud. Between these extremes are the comparatively few who have studied the matter and who find the use of hypnotism in selected cases productive of results that cannot otherwise be obtained.

It is the duty of every physician to understand all of the phenomena of "Suggestion" and of "Hypnotic Suggestion." It is a part of knowledge that is expected of him even if he never finds use for it. The use of it is sometimes followed by such remarkable and inimitable results that he owes it to his patients to have it in readiness. There are cases that drugs are not made for, shall he helplessly watch these cases drift from physician to physician and finally see them relieved by some "Christian Scientist?" He may then scornfully declare that there was nothing the matter with them anyhow but the so-called "Scientist" has the gold and the glory for all that. Nothing but the ignorance of the profession on this subject is the excuse for the existence ot "Christian Science" with its absurd faith and sometimes admirable results. But where one sufferer is relieved by the so-called "Science" there are a hundred who merely have suffering and disease prolonged until, often, they turn to legitimate medicine too late. For all this the ignorance of the profession is responsible, but for that lack of knowledge on the part of the doctors of "Christian Science" operator could not exist.

Then in his every-day practice both the physician and surgeon will find constant use for Suggestion, a careful study will cause him to guard every movement and tone. His very manner conveys suggestions, good or bad. If he is well versed in the use of the deeper stages of hypnosis he will surprise himself sometimes. Knowing how little to expect from it he will not attempt the "arise and walk" miracle but will be satisfied if once in a dozen cases he can relieve nausea of pregnancy, pressure pains of pregnancy, a headache or a toothache, a bad habit, of case of insomnia, loss of appetite in some wasting disease, a sprained back, from rheumatism or syphilis, nervousness, hysterical paralysis or blindness, masturbation, hystero-epilepsy or one of a score of other ills he may try it on. And if he can deliver one parturient during hypnosis or if he finds himself ten miles from chloroform and has to perform some minor surgical operation and the patient forms a good subject, he will feel amply repaid for the trouble of learning hypnotism.

Anyone can hypnotize, as in everything else some will become more proficient than others, but, if he can never use it, the knowledge of when to call in some one who can, will be of immense service to him and to his patients. There are numerous text-books on the subject, of these Moll is is probably the safest for a beginner, then Bernhein. Later on, when sure of himself, he can read Delenge and reject his delusions.

The Sabula Food Poisoning Epidemic.

At the annual meeting of the Iowa State Medical Society, Dr. A. Crawford, of Miles, read an interesting paper on the subject.

The cause of the epidemic was shown to be the eating of pressed chicken that had been kept in a warm cellar for twenty-four hours before being served.

The weather was extremely hot and the meats were kept without ice in a cellar that was badly infested with flies. There was no opportunity for examining the food as the first cases did not come under a physician's care until five days after the wedding. But the testimony of the guests showed that the chicken was in an advanced stage of decomposition when eaten.

Out of three hundred guests present at the wedding, over one hundred were sick and seven deaths occurred.

The period of incubation varied from four to twenty-four days, but over one-half of the sick began to complain before the tenth day. The severe pain experienced in the muscles of the extremities, as well as in the abdomen, led some to regard the epidemic as one of trichinæ poisoning. A careful investigation showed that many of the sick had eaten no pork, and the microscopical examinations made by a number of experts failed to discover the parasite. Two autopsies were made, and in both there were found extensive ulceration of the mucous membrane of the cæcum and colon, enlargement of the liver and spleen, and other changes suggestive of typhoid fever. After quite a thorough investigation by the State Board of Health, the conclusion was reached that the epidemic was one of enteric fever due to the eating of infected meats. How the meats became infected with the specific bacillus of typhoid remains a mystery, as there had not been a case of this disease in the community for nearly a year prior to the outbreak.

Lysemia.

The above name has been given to Malarial Hematuria and is plainly a great improvement. Hematuria names a symptom of the condition only. Lysemia describes the only essential pathological condition fully. From ava, to loose or set free and aiua, blood we have "lysemia" indicating a dissolution of the blood cells and a freeing of the coloring matter. Whether Malarial Lysemia will ever supplant the name Malarial Hematuria, only time will tell, but at any rate the word is a needed one. There are many other causes for lysemia, the state occurs in the course of yellow fever and in puerperal fever and in paisoning from many chemical agents. And now it has a name.

But Malarial lysemia interests us of the South most of all. What a change ten years has wrought in the treatment. And it has been a working backward toward truth. First the patients found it out; then the nurses clamored the truth; then the moss-back, one-gallus, undiplomaed practitioner took it up, in self defence the better class of country doctors had to admit it; their fight with the city men who never saw hematuria, but who considered the word "Malarial" a fetich demanding quinine, lasted years. Finally Science steps in and discovers the truth in her own way and the country doctor and the moss-back and the nurse and the rebellious patient are vindicated. Ten years ago th treatment for this "Roanoke Fever" was quinine in large doses. Why? "Because it is of malarial origin," answered the M. D. "But Doctor," said the patient "the quinine makes it worse and when I am over one attack the quinine makes me pass bloody urine again." "No it dont" answered the doctor, "and I cant help it if it does. It is a malarial disease and quinine cures Malaria. So quinine you've got to take if it kills you." And it generally killed him.

Then the nurse took up the fight, the nurse did not know anything out of books and was contrary anyhow. Then the one-gallus doctor, who had graduated in a livery stable, was weak enough to let the patients and old women over pursuade him and he omitted quinine and all his patients got well. What a name he ocquired. His polished professional neighbor who was "regular" to his boot tops had to stop quinine in self defence.

Then come the war with the city brethren who could not believe because they saw no cases. That war would have lastee till now had not Science and the Microscope decreed it.

Science first found out that when the blood explosion took place the plasmodiae were killed by some unknown agent then set free. With the microscope declaring that no germs were present the need of quinine was not apparent. Science then further declared that quinine has a tendency to cause dissolution of blood cells; consequently, while this tendency can do no harm ordinarily, yet when the conditions all are favorable quinine will, or may, bring on the disease. So the pendulum swung too far, as usual, and quinine was let too severely alone. For in many cases the amount of lysemia is not great enough to kill all the germs. Then with malarial remitted and hematuria both present the patient is in a fix. In these cases you must still give quinine until fever is controlled, not the moderate fever that is due to the disturbance of function and gradually disappears but the fever that is distinctly malarial. Sometimes one dose of quinine at such a time will make the lysemic condition so much greater that the germs will all be killed. Then you can dispense with quinine.

But what is the use of having lysemia at all?

Let the doctor learn how to give quinine when the first malarial paroxysm comes on, let the patient learn how to take quinine when they first need it and the condition known hitherto as malarial hematuria will be as extinct as the Dodo.

For leucorrhœa, Donovan's solution is useful, the arsenic acting as a tonic.

Throat Manifestations of Transmitted Syphilis.

From a paper prepared by Dr. H. W. Whitaker, of Columbus, O., for the second annual meeting of the Western Opthalmological, Otogical, Laryngological and Rhinological Association, at St. Louis, Mo., April 8th, and 9th, 1897, we make the following abstract.

He referred to the late and erratic symptoms of improperly or imperfectly treated cases of syphilis, that, of late, have been tabulated and reported by various observers in the Medical Journal, and its transmission.

Indeed, it is my conviction that with careful and conscientious treatment, judiciously selected and persistently administered, and a rigid restriction by the medical attendant as to time when a syphilitic may marry, the disease should not, and would not be transmitted. For frequently, however, we encounter patients who are irresponsible and unreliable, in whom the moral impulse throbs but feebly, and who further consider they have a perfect right to indiscriminately propagate the disease because of their own misfortunes. That infection does occur among married persons is deplorable to say the least, and it is then often impossible to prevent the hereditary expressions of the disease in their off-spring. In such cases the attending physician is usually made aware of these conditions, and it thus lies within his power to render invaluable assistance to the mother in endeavoring to prevent an abortion ; by proceeding with her constitutional treatment so vigorously that by the time of birth the child will have received sufficient medication to escape; much of the dreaded conditions present in a syphilitic infant. As a rule fœtal life yields slowly and imperfectly, though the maternal medication ; but sufficiently good results can be obtained upon the child to warrant the effort in establishing the therapeutic affects of mercury. When a child is borne of infected parents, it should at once become an object of especial interest to the physician, who should inspect the child with systematic regularity with the hope of anticipating or discovering the first lesion of the disease. Repeated examinations should be made until puberty has been attained.

I deem it no compliment to the physician for the nurse, or the mother to announce to him that, "something is very wrong with the baby." Further and more important lesions may be established ere the mother's vigilant eyes can detect an eruption, a physician is remiss in his obligations and duty to patient if he permits them long to escape observation.

Remembering the cell instability of childhood and the glandular irritability usually present during any reaction it is no wonder, indeed, that the mucons membrane and lymphatics, become infiltrated early and assume an active part in the subsequent history of the disease.

Physicians seem prone to over-look lymphatic glandular irritability, considering it probably as one of the features of childhood, rather than one of pathologicial importance worthy of attention. It is to the integrity and healthfulness of the lymphatic system that we look for the proper neutrition growth and the subsequent development of the child.

What even deranges its function in any way, causes a lesion of nutrition, which as an example, is present in the majority of cases of syphilitic births. Throat lesions of the disease we encounter are frequently in the exceedingly young than other forms of the infection, but are apt, however, to develop later on and sometimes yield unsatisfactorily to treatment.

The naso-pharangeal mucous membrane is ever ready to become hyperæmic and it responds more or less quickly to a variety of infectious agencies, such as measles, whoop ing cough, etc. There is present a characteristic redness of the fauces in primary syphilis, which is but one of the local expressions of the systemic infection. In hereditary syphilis the same conditions are present, but they are less active. The mucous membrance of young life, apparently, is predisposed to receive infection.

The lymphatics bearing the infectious agents stimulate the lymph follicles, which upon receiving an increased quantity of blood assume active proliferation. The lymphatic hyperplasia becomes more or less general and soon the whole mucous membrane is invaded about the head and throat.

The normal histological elements of the muciparous glands are hypertrophied and there is an increase mucous flow.

In the congested parts there is an increased local temperature, which, with the abnormal and abundant quantity of mucous favors cell proliferation and degeneration.

When these conditions are established early in life we have the "lymphatic diathesis" to deal with, and to which we owe so much for the many pathological conditions subsequently found in the throat.

Gummy deposits occur in the lymyhatic bodies about the muciparous glands in the fauces and on the soft parts about the throat, Owing to the liberal distribution of these bodies extensive areas may be involved be-

fore the softening process begins, which, when once established, rapidly spreads and causes extensive destruction.

When the *prognosis* of hereditary syphilis is considered careful observation is necessary; otherwise, an unexpected calamity may embarrass the attending physician. The younger the child, the more guarded opinion should be given. The small larynx of childhood, the tendency to œdema, and laryngismus often arising after exposure to cold, or sudden and decided changes in temperature make unfavorable combinations from which syphilitics occasionally and suddenly die.

Treatment.—The treatment of syphilitics is a question that has never been satisfactorily answered to a great number of physicians, and never will be to those who consider it as an incurable disease. In transmitted syphilis the child's digestion is an important factor too often overlooked. Faulty digestion is responsible for the many instances of mal-assimilation.

With an imperfect digestion in a general dyscrasia, such as syphilis, it is impossible to obtain nutrition adequate for the requirements of normal growth and development. To assist the lagging digestion and aid the assimilative process the administration of the prepared digestive ferments is desirable. Usually beneficial results can thus be obtained. To further assist in the process of nutrition the predigested foods may be, and should be, used when indicated.

Syphilitics, with an occasional exception, bear the mercurials well, and certainly there is no other remedy at our command that is its equivalent or can take its place in the treatment of this disease, either in the primary form or the inherited conditions. No other pathological condition will yield so surely to medication as does syphilis to the use of full, regular and continuous doses of mercury. To further assist its beneficial affects it may be advantageously combined with iron.

Indeed, I am of the opinion that Iron administered in the first stages of the disease is a remedy possessing an incalculable value in sustaining the nutrition and preventing anæmia. With a liberal supply of iron, combined with mercury, it is the usual experience to find that syphilitics weigh more at the conclusion of this treatment than at the beginning of treatment.

For infants Gray powder seemingly gives best results. It is milder in its action, pleasanter to administer, and does not disturb the digestion as other preparations of mercury are apt to do.

In the later developments of the disease the alkaline iodides are indicated and should should be given, either simply or in combination with the mercurial preparations according to the established methods, and known as "the mixed treatment."

Cod Liver Oil seems to me to be worthy of more consideration than it receives in the management of the disease. It possesses the qualities of a rich food which is ever desirable in the delayed growth and development of childhood.

To obtain the best results from its use, I have found it necessary, however, to depart from the usual and accepted methods of administration.

Given after meals it is not properly acted upon by the pancreatic juices, and, therefore, cannot be assimilated, but a portion of it remains in the bowels, causing digestive disturbances.

Given before meals, in smaller quantity, it is better emulsified and is completely absorbed. It can further be improved by administering with it the pancreatic ferments which we have isolated and offered to us.

Local treatment, in my experience, has never proven to be a phenominal success; but they should be encouraged inasmuch as they keep clean any ulcerating surface and antagonize offensive odors in the breath.

As to the length of time treatment should be continued in hereditary syphilis, it would be difficult to give an estimate. It should be governed, however, by the good results obtained and persued as long as the child's growth, development and general health seemingly requires.

If constitutional treatment in hereditary syphilis is neglected and not systematically continued from the very first appearance; if the child is not properly nourished, fed and hygienically cared for until the disease is overcome, nothing but disappointment will be the result.

The Faucial Tonsil.

Dr. G. Hudson Makuen, of Philadelphia, presented a paper on this subject before the American Laryngological, Rhinological and Otological Society, Washington, D. C., May 2d, 1897.

He believes that the faucial tonsil does not receive the careful attention which it deserves.

There are two conditions of this tonsil which he pointed out as being dangerous to the general health of the patient.

1. The hypertrophied condition.

2. The later stage of this same condition known as the atrophied tonsil.

The hypertrophied tonsil is harmful in various ways. It obstructs respiration to a slight extent; it presses upon the surrounding structures, and interferes with the nor-

mal action of the palatal and pharyngeal muscles, and it keeps the fauces in a constant state of irritation and congestion. There is a concomitant hyper-secretion of mucous which is not hawked away because of the functional inactivity of the muscles, and it gradually extends downward into the larynx and trachæ, and even into the bronchi. Congestion of the fauces results also in the formation of fibrous adhesions between the tonsils and the palatal folds, and deep pockets are often thus formed in which are found the secretions of the tonsil admixed with particles of food which have been forced in during the process of mastication and deglutition. These pockets become a veritable hot bed of infection, and are the chief cause of the various acute inflammations which are so common in and about the tonsil.

The writer claims that the atrophied tonsil is almost as harmful as the hypertrophied one. It does not encroach so much upon the oro-pharyngeal space, but it has all the ther baneful influences of the hypertrophied tonsil. Numerous crypts and pockets are found in this condition interferring with the drainage of the parts.

The doctor demonstrated also a broad, thick band, which is found in many of these cases, running from the upper and posterior surface of the anterior palatal fold to the lower and anterior surface of the posterior fold. This band was named by Dr. Harrison Allen in 1891 the opercular fold.

Dr. Makuen then proceeded to discuss the surgery of these conditions. He said it is not sufficient to ablate the portion of the tonsil projecting beyond the palatal pillar, and he uses the tonsillatonic very rarely except in children where the musa usually has a small pedicle and is unattached to the palatal folds.

He exhibited the instruments, blunt and cutting, with which he separates the adhesions and opens the pockets. This is the important part of the treatment in the adult throat. All incisions are carefully seared with the cautery to prevent re-adhesions.

With this method the tonsil becomes much reduced in size and very little tissue need ever be cut away. The danger of hemorrhage is also much reduced, because only small incisions are made at a time, and most patients will consent to this proceduce more readily than they will to the entire removal of the gland. He pointed out the importance of a thorough cleansing of the parts after every cutting operation, and the application of a menthol solution (20 per cent. in liq. alboline) to relieve pain.

Contrary to the popular teaching he advises the removal of the so-called opercular fold, and especially when it is found in the throats of singers. Only good results have followed in the cases in which he has done this operation, and hemorrhage, which has been mentioned as an objection, has not given any trouble. After the operation there is experienced a sense of openness in the throat and greater freedom in the palatal and pharyngeal muscles.

Concerning Creosotal.‡

Creosote has been for many years the favorite remedy for the cure of pulmonary tuberculosis, and it was displaced only temporarily and for a short time, by the tuberculin that so lamentably disappointed us. It is clear, oil-like fluid containing 60 to 90 per cent. of guaiacol, besides creosol and phlorol and is a distillation product of beechweed tar. Its discoverers was Dr. Reichenbach, of Moravia; Bouchard, Gimbert, and later Franzel noticed its beneficial action on the cough, and more especially upon the purulent expectoration of phthisical patients; but the first to use it in a long series of cases and in large doses was Sommerbrodt. After an experience of five years this latter authority published his belief that creosote was a curative agent for tubercular disease.

On the other hand Albu, on the basis of a large experience in the Moabit Hospital of Berlin, proved in 1892 that creosote neither influenced the fever, nor permanently diminished the number of the tubercle bacilli, nor prevented the progress of the local destructive processes. In conjunction with Weyl, he showed that even the incorporation of large quantities of creosote with the blood had no influence on the tubercular processes in the lungs, though the drug might have a favorable effect upon expectoration and upon stomach digestion. Dr. Flintzer summarizes the results obtained from the creosote treatment in the Jena Medical Clinic by the statement that in cases of phthisis not too far advanced, large doses caused marked improvement both in the general condition and in the local process. Yet Stoerk, Professor of Laryngology at Vienna, calls attention to the great number of cases in which complete anorexia, terrible loss of weight, violent cough and night sweats are, he believes, the consequences of the administration of creosote. The observations upon which these discordant judgments are based are undoubtedly correct, and they simply show that there is a poisonous as well as a curative action of too long continued and too large dosage with the drug.

Creosote in large doses is not harmless; it is a caustic poison that causes death by

‡Abstract of Inaugural Dissertion for Obtaining the Degree of M. D. at the Unixersity of Berlin by Hans Nordt, (February 26th, 1897.)

gastro-enteritis, as Friedheim has shown. Bourget found on post-mortem examination circumscribed inflammations at those points of the Stomach and intestines where the capsules had opened. The smaller doses now in vogue cause more chronic inflammations and thus hinder the absorption of nutriment. Only the small minority of phthisical patients with very resistent digestive organs experience the curative action of creosote; most of them feel its poisonous effects mainly. We are justified in seeking high and low for a preparation that shall exhibit the one action without the other.

Chaumier of Tours has proved that in the Carbonate of Creosote (Creosotal) we possess such a drug. It is a mixture of the phenol carbonates of creosote, contains over 90 per cent. of the purest creosote, and is a viscid, oily fluid, free from the repugnant odor and burning taste of the crude drug. It has no disturbing action upon the mucous membrane of the alimentary canal. Though discovered in 1893, its literature is small. Chaumier reported in the *Munchener Medicinische Wochenschrift* of 1894 that it was preferable to creosote because it could be given by the mouth in much larger doses and for a longer time. Dr. S. Reiner, in the *Therapeutische Wochenschrift*, September 15th, 1895, recorded increase of body weight and appetite even in advanced cases under its use. Secretion was diminished in some cases, but the local process was not affected. In one case, not of lung disease, but of carcinoma of the uterus, the administration of 4 grams (1 dram) of Creosotal for several days caused the appetite to reappear in a formerly completely anorexic patient. In the *New York Medical Journal* of August 17th, 1895, Dr. Louis Fischer, pediatrist to the German Polyklinik, New York, records two cases in children in which the tubercle bacilli disappeared and all the symptoms improved under the creosotal treatment. Greif, in the *Deutsche Medizinische Wochenschrift*, 1894, reports on a number of cases in which it was used. Six for advanced cases ended fatally, yet had a good appetite until they died. In the other milder ones the cough diminished and the weight increased; cures are not recorded, probably because the time of treatment was too short.

Instigated by these partially favorable reports, Creosotal was administered to a number of patients during the past year in Professor van Leyden's Medical Clinic at the University of Berlin. The experiments were made under direction of Dr. Jacob, Chief of Clinic, and the treatment and observation of the cases was confided to me.

In ambulant practice, of course, the patient could not be controlled so minutely as on an hospital; yet our observations were made with the greatest care and all possible objectivity. We have excluded all cases which did not follow our directions with exactitude, or which disappeared after a short course of treatment. All were cases of pronounced phthisis. In most of them the tubercle bacilli were found in sputum; and the few others, who either had no expectoration, or brought only saliva for examination left no doubt as to the correctness of the diagnosis.

In all cases great stress was laid upon the diet. One and a half to two liters (3 to 4 pints) of milk, and two to four eggs daily, with oatmeal, cocoa, potato soup, malt liquids and vegetables were their chief food. They were carefully examined and weighed at intervals of eight days. Every second or third visit a minute physical examination was made, often with the assistance of one of my colleagues; and at certain intervals they were examined by Dr. Jacob.

The dose of Creosotal that was administered was not as large as that recommended by some of the above mentioned authorities. Each patient began with 5 drops three times daily, increasing the dose 3 drops every day, until 25 drops were taken at a dose. At this they were kept for from one to four weeks, then the dose was diminished in a similar ratio until only 10 drops were taken thrice daily, and then the ascending scale was begun again. This dosage was selected in the first place because the high price of Creosotal rendered it impossible for poor people, to which class most of our patients belonged, to take daily quantities of 20 grams (5 drams), or more. But, as the results show, we obtained very satisfactory effects at a comparatively small cost. In the second place we were afraid that very large doses of creosote might have ill effects, more especially upon the patients' appetites.

The author here tabulates the 23 cases on which his conclusions are based. In most of them the appetite was increased, weight was gained, the expectoration and the night sweats were diminished, and the physical signs were improved. In 9 cases the author characterizes his results as very good, in 12 cases as moderately good, whilst in 2 cases no results at all were obtained from the treatment. Of these latter two, one was an advanced case, in which both lungs were already affected for years, and the second one was only under treatment for two months. He cannot of course decide whether the bad results were due to the creosote or to the natural course of the disease.

In all the other cases good results, either moderate or marked, were recorded, though the greater part of the treatment was carried out during the fall and winter, when the cli-

matic influences were unfavorable, and fresh air and exercise could not be sufficiently taken. In 11 patients the general condition was markedly improved. One patient said, after taking 60 grams (2 ounces) of Creosotal, that she had not felt so well in fourteen years; and all the bad symptoms disappeared entirely after six weeks of treatment; after seven months treatment the local symptoms had almost entirely vanished. In three cases, besides the two noted above, the subjective condition remained bad; a fact that can be ascribed in one of them at least to an old and inverate syphilis that was also present.

In one case oly did the Creosotal have a bad effect upon the appetite. Three cases had taken creosote before, with the effect of causing a complete loss of the appetite; under Creosotal the appetite increased from week to week; 15 others showed the same satisfactory results; and only in 4 cases, that had no appetite when the treatment was begun, was the condition permanent.

Very much the same thing can be said of the weight. The best results were noted in one case, which gained 16 pounds in three months. In 16 cases there was a gain of 12 pounds; in 4 cases the weight remained stationary; and in 2 cases only did the weight decrease 3 and 1½ pound respectively.

Upon the night sweats and the fever the action of the Creosote Carbonate was very favorable. The former always disappeared after a relatively short period of treatment. The latter was obstinate in one case only, and finally disappeared in that also.

Cough and expectoration disappeared entirely in four cases; in four others there was no change in this respect; and in all the other cases there was a regular weekly diminution in both symptoms.

The effect of the Creosotal upon the local lesions was in general not very marked. In most of the cases, however, the treatment was not continued long enough for us to observe anything of the kind. Wherever the treatment was continued for over six months a marked improvement was noted. In two of the cases, treated for ten and eight months respectively, the physical symptoms of phthisis disappeared entirely. In five was a marked and in five others a moderate improvement in the local process. In three patients the local disease remained stationary. In four cases the process retrogressed in one lung, whilst the other became affected. In the three last cases the lesions progressed. In one case a cavity seemed to have become encapsulated under the Creosotal treatment.

The patients have remained under observation since then, and we intend to report further as to the influence of the Creosotal on the local process at a later time. We are also engaged in bacteriological investigations upon the influence of Creosotal upon the development, viability, and virulence of the tubercle bacilli.

Reviewing these experiences of almost a year, we must coincide with those who regard Creosotal as far preferable to the ordinary creosote. In one case only was there a light diminution of the appetite, and in no case was there any ill effect on the stomach or intestines, any chronic inflammatory conditions leading to inability to absorb nourishment.

We are certain that Creosotal is entirely free from the poisonous effects of creosote and our observations agree with those of Reiner, that in almost all cases it causes an increase of the appetite and of the body weight. But whilst that observer found that secretion had diminished only in a few cases, our experience was that it occurred in more than two-thirds of them. And we further conclude that a long continued course of the drug not only causes retrogression but effects a complete cure of the local process, provided that the cases are not too far advanced when the treatment is begun. But we agree entirely with Greif, that Creosotal is to be used even in very bad cases, since it secures a good appetite to the patient until the end, and lessens the troublesome cough. And we would again call attention to the fact that the night sweats and the fever can be removed in a very short time by the use of Creosotal.

In conclusion we must state that we are not unmindful of the very varying picture that phthisis presents under any method of treatment, and that in almost all cases periods of stasis or even of retrogression are observed. But Creosotal fulfills some of the chief postulates demanded of an antiphthisical remedy, more especially in regard to the night sweats and the fever. A portion of our patients had used sterisol and other creosote preparations before they were put upon the the carbonate, and their condition became worse rather than improved; whilst under Creosotal they at once began to mend.

We are of opinion that any case of beginning or not too far advanced phthisis may be treated with Creosotal with the expectation of a good result. Naturally a nourishing diet and general good hygiene must go hand in hand with it. And here is the especial advantage of Creosotal; inasmuch as it improves the appetite, and does not irritate the gastro-intestinal canal, it permits us to enforce the proper dietetic treatment of the disease at the same time.

Dr. J. W. Long.

Makes a Parting Address at the Medical College; To Return to North Carolina; The Gifted Surgeon Will Go Back to His Own Home—He Has Kind Words for Richmond and for the College—Other Speeches Made.

Dr. J. W. Long, one of the most popular physicians in the city, and for several years a member of the faculty of the Medical College of Virginia, having determined to return to his former home in North Carolina, delivered, by invitation, in the ampitheatre of the college last night, a farewell address.

A large assemblage, consisting of members of the faculty of the Medical College of Virginia and of the University College of Medicine and Surgery, and the students of the former institution, was present to do honor to the physician, who during his brief residence in this city has won a place in their hearts not easily to be filled.

DR. LONG'S ADDRESS.

Dr. L, L. Levy presided over the meeting, and a few appropriate remarks introduced Dr. Long, who, after the cheers that greated his presentation had subsided, said:

Mr. Chairman and Gentlemen: I don't like to say "good-by." It has a gruesome sound that grates harshly on the tender sensibilities of the soul. I avoid it when I can, without doing violence to those courtesies due to friends and associates. A favorite song of my little daughter, who has been transplanted from the terrestrial to the celestial, was one entitled, "We'll Never Say Good-by in Heaven." These words I had inscribed in the imperishable marble that marks her resting place. But, trying as it may be to say the last farewell. it isn't exactly right for a fellow to pack up his books and instrument kit, and, like the Arab, "quietly steal away in the night," without giving some expression of gratitude for the friendships and pleasures enjoyed during the days that are rapidly drawing to a close, and of regret because the ties that now bind us together must soon be severed.

I would say to the class that I am not unmindful of the kindly interest which you manifested in my welfare during my recent indisposition—when I was laid up for repairs. I am glad to tell you that I am all right once more; indeed, my constitution was not seriously impared, only my by-laws were a little out of fix. It is a real good thing for a doctor to get sick once in awhile for then he realizes that medicine is like good advice—much more pleasant to give than to take.

HE LEAVES WITH RELUCTANCE.

I need hardly say that it is with great reluctance that I sever my conection with the Medical College of Virginia, and, of course, with the students who annually flock to her halls for instruction. I feel a deep personal interest in every student who has attended my lectures, and particularly is this true of the gentlemen whom I address on this occasion, for surely there were never more earnest, courteous, and attentive students than the classes of 1896 and 1897. As the beauty of talking is in having an audience, so is the pleasure of lecturing in having a responsive class. Your studious habits; your respectful deportment in the classroom, as well as out of it; your evident appreciation of my lectures and clinics—have won from me the highest esteem and tenderest regards, and have been a constant stimulus and source of inspiration to me to give you the very best that was possible. Whatever of success may have attended the teaching in my department is due largely to the enthusiastic support of the class. I thank you for it. Whenever I have stood before you, I have looked beyond the student to the self sacrificing father and mother, or it may be a devoted sister or a generous brother, who have made it possible for you to be here, In some instances I have seen neither of these, but the man, who, by his own unaided industry, is paying his own way. I have looked forward to the time when you shall stand by the bedside of the sick and dying, and, realizing from experience the exigencies of those trying occasions, have faithfully endeavored to give you the theory of medicine and surgeory as they relate to my chair crystalized into a practical form, which may be used to the relief of your patient and the building up of your own reputation.

THE COLLEGE IS FLOURISHING.

I am glad to tell you tonight that the Medical College of Virginia was never in a more flourishing condition than at present. The way in which the school has expanded and developed within the last few years has astonished even her warmest friends. Today she points with pride to her able faculty, her graded course, her laboratories, her hospital, her clinics, her technique, and with a modesty becoming her many virtues, yet with assurance, she challenges comparison. Already plans have been perfected for an enlarged faculty, a four-year course.

an obstetric hospital, and many other improvements. Rest assured that the old school will always be found up to date.

I may be pardoned for saying in this connection that while the other departments have gone forward, that Gynecology and Pediatrics has not langusihed by the wayside. While other chairs have been contemplating teaching, the class in sections this department has actually been doing it all the year, in the dispensary, as you can testify. This will untimately be done in all the departments.

Of the character of the teaching in gynecology and pediatries you are in position to judge for yourselves.

My clinical work in the hospital is on record. You may be gratified to know that of the many gynecological operations you have seen me do in the past eighteen months, including my paivate cases in the Old Dominion Hospiral, only one has proved fatal. This means, gentlemen, that the techique employed in this institution, and of which pou have had the full benefit, is pretty nearly perfect.

But the best evidence that I can offer you of the great advancement made by the Chair of Gynecology and Pediatrics is that whereas four years ago the chair might have been had for the asking; now that it has been vacated, it proves to be a much coveted prize, and in this you will agree with me when you recognize the distinguished gentleman who will succeed me.

KIND WORDS FOR HIS BRETHERN.

But it is not alone the school that I would speak this evening. My relations with the profession of Richmond have been of the most pleasant nature. The support that has been accorded me as a gynecologist and abdominal surgeon has been of the most generous character; indeed, much of my work has been consultations and referred cases. And I am glad to say that these have come not only from my own colleagues, but from members of our sister schoool, as well as from the profession at large. With many of these gentlemen I have sustained the most pleasant relations, and I am proud to number them among my warmest and staunchest friends. The hardest thing for me to do in connection with my removal is to tear myself away from those whom I have learned to love and esteem for their many virtues and admirable traits of chrracter. Innumerable friends have asked: "What are you going to leave Richmond for?" To tell the truth, I have no good reason, except it be the fact that no man ever left North Carolina, no matter how well he succeeded, that he did seize the first opportunity to return to the Old North State.

The reason the Chinese can never make good American citizens is not because they wear pig-tails and eat their rice with chopsticks, but because their every thought, both waking and sleeping, is to accumulate money enough to take them back to the Flowery Kingdom, and you might as well try to down Banquo's ghost as to try to get a Chinaman's consent to be buried elsewhere than in his native soil. It is but another illustration of the homely adage that "chickens go home to rooost."

But seriously, I feel that with my enlarged experience, there is a wide field for usefulness and an opportunity for me to do much good in the State which gave me birth. With a thoroughly-equipped hospital and a well-trained staff, I shall continue the same character of surgical work which has been so pleasant to me here.

HIS TENDER PARTING WORDS.

In conclusion let me say that the four years spent in Richmond have been full of labor—some of love and some of neccesity—yet seasons of refreshment, while rather infrequent, have not been altogether absent; especially has the return of April each year brought with it a welcomed relaxation and relief to the tired and anxious professor, as well as to the restless and impatient student. Sunshine and shadows have chased each other so closely, sharp storms of conflict, gentle showers of mercy, and bright days of success have intermingled so constantly, that as I look back I see not one long, dreary night of failure, nor a never-ending day of dazzling, deceptive brightness, but what is far better, I see spanning the horizon the rich colors of the rainbow, full of assurance for what has been accomplished in the past, pregnant with hope for the future, and beaming with the promise that the floods of adversity shall never overflow him who is true to himself, true to the trust committed to his care, and true to the God who doeth all things well.

OTHER SPEECHES MADE,

When Dr. Long took his seat the students cheered him to the echo, and it was some time before quiet was restored.

Dr. Levy then arose and briefly set forth the loss Dr. Long's departure would mean to the medical profession of this city. Dr. J. Allison Hodges, of the University College, next spoke, and referred in glowing terms to the work that had been done in Richmond by Dr. Long. He spoke of his personal regret at losing so valuable a member of the profession in this city, and expressed the hope that Dr. Long's effort in the field to which he is going would be

crowned with the same success he had achieved in this city.

THE STUDENTS' TRIBUTE.

The meeting at this juncture became rather informal, and the students took matters in hand, calling on various gentlemen present for speeches.

Mr. Greer Baughman was called upon to speak for the students, and in encomiastic words he briefly expressed the regret the students felt at the loss they would sustain in the departure of their professor from the college and the city.

Mr. Griner, another student, voiced everything that had been said by Mr. Baughman adding that Dr. Long's place would be one hard to fill, both in the community and in the college.

Coroner W. H. Taylor was next called upon to speak, but he excused himself, saying that he would take occasion to bid Dr. Long adieu around the corner.

Rev. Fenner S. Stickney was noticed in the audience, and he, also, was called upon. He paid a high tribute to Dr. Long's sterling worth, and when he took his seat Dr. W. P. Matthews called attention to the presence in the audience of Dr. Ernest Levy. Dr. Levy was called upon, and briefly but earnestly eulogized Dr. Long.

Dr. J. Page Massie was the next speaker. He told of the work done by Dr. Long in the college and in Richmond, and spoke of his great ability as a physician. Dr. Massie grew humorous as he proceeded, and evoked much laughter by his remarks.

Dr. Charles R. Robins and Mr. Dan. Talley, secretary of the college, then paid tribute to the departing physician, and Dr. Levy, calling attention to the illness of Dr. Charles M. Shields, a member of the faculty, said he thought in view of this fact it would be well to adjourn the meeting. A mortion to that effect was made and carried, and the gentlemen left for their homes.—*Richmond Dispatch.*

Syphilitic Amblyopia.‡

The title of this paper is not a familar one from the fact, possibly, that there is not sufficient clinical evidence to warrant a separate and distinctive designation. Yet we know that such a thing does exist though, like many other troubles, for instance exostosis of the orbit and vitreous cysticerous, it is met with very rarely. I have looked up the literature of amblyopia pretty thoroughly and have concluded that syphilitic amblyopia is entitled to a place in our text-books, along with the congenital, alcoholic, hysterical and other varieties.

A gentleman, Mr. J., came to me in November 1895. His age was 58, his occupation that of a railroad engineer. He was a strong robust man, five feet eight inches tall, weighing one hundred and seventy-five pounds, and full of life and vigor. He told me that seventeen years ago his vision began to fail gradually day by day, until he was forced to give up his position; and, at this time, he had to have an attendant with him to see that he did not stray into byways, off of the sidewalk and in the way of cars, vehicles, etc.

On examination I found the field of vision considerably contracted in both eyes, especially on the temporal side. He still had sufficient sight to distinguish doors and windows without trouble. His vision was: O. D. V. $\frac{2}{200}$: O. S. V. $\frac{1}{200}$.

Color perception was very much impaired for both green and red, and blue could not be told from black. The ophthalmoscopic findings were nearly negative. The retina was of a pale, dim, lifeless hue, as if viewed through a veil. The fovea centralis could hardly be discerned. The retinal bloodvessels were extremely contracted. The vitreous appeared clear and quite free from coloring matter of any kind. The lens looked a little dull on the posterior surface, but otherwise normal, as was also the cornea. The iris reacted to light but very poorly.

I inquired particularly as to a syphilitic history. The patient could give but little information on this point. He said he had possibly been a little wild in his youth, and about the time that he was grown he had quite an eruption appeared over his body; but he was treated for it by a good physician and it soon disappeared. He told me he had been treated at different times by several different oculists, but without benefit, and he had concluded to seek relief in New York or Boston; but decided that he would give the west one more chance, and so came to me. I told him I would treat him two weeks, at the end of which time, if I found him getting no better, I would not hesitate to tell him so; and that I thought the outlook was anything but encouraging.

I suspected that his trouble was of syphilitic origin and put him at once on the following treatment:

(1) ℞ Potassa Iodidi.....℥ iij
Hydrargiri Corrosive.....Grs 1
Aquæ Dest.....Oᵈ. ℥ iij
M. Sig.....One ℥ Tid

(2) ℞ Strychnæ Sulph.....Gas. 1-30
(Triturates)
No. XXX
Sig. One Tab. Tid.

‡Dr. R. F. LeMond, Col. State Med. Society.

In addstion to this I used the postiive galvanic pole of eight cells five minutes in each eye, once a day. I continued to increase the iodide until he was taking 150 grains a day, and also the bichloride up to three-twentieths of a grain a day; and the strychnia I increased to three-twentieths of a grain a day. At the end of two weeks he was so much improved under this course of treatment that he did not any longer need an attendant. At the end of two and one-half months his vision had risen to twenty-sixtieths, and my assistant began to give him a daily lesson in the alphabet, as he had forgotten his letters. We continued thus for six weeks longer, by which time the patient could see sufficiently well to easily recognize ordinary newspaper print, with his error of refraction corrected, which was a plus 5.00 D. S. After wearing these glasses for some two weeks with no apparent difficulty whatever, and his vision holding up quite well, I then dismissed him.

The Development of the Child as Modified by the Condition of His Eyes.†

If I were to be asked to specify that portion of the human body which has received the greatest care during the past twenty-five or thirty years, I would unhesitatingly declare that it is the teeth. Generally speaking, care of the teeth is considered to be the first importance, as it is thought that in this care lies the very foundation of health. We are told by the dentist—and very properly I believe—that unless this attention is given to the teeth from childhood to maturity, the seeds of future disorders in the digestive apparatus are very liable to develop, resulting possibly in very serious consequences.

The teeth are in truth the portal of the digestive tract and there is every reason why they should have the very best care, yet, if disastrous results are liable to follow their neglect, what shall be said concerning the consequences of habitual disregard of that more delicate and wonderful mechanism—the eye—neglect of which is especially noticeable in the case of children.

Through his eyes the child gains his first ideas of the external world; through them, aided by touch and muscular sense, he learns the direction, size and distance of objects in space, Very early in life his mind begins to take cognizance of visual impressions. Upon his ability to correctly interpret them may depend his whole future life, either for success or failure. If, through any defect in his eyes, false or distorted pictures of objects are formed upon the retina, then will his notions of the external world be erroneous, his judgment unreliable, and but little dependence can be placed upon his statements concerning events coming under his personal observation.

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The educator, on the other hand, usually considers the child's eyes, if he thinks of them at all, solely as an optical instrument through which he receives his knowledge of the external world. He generally disregards their possible inaccuracy in receiving visual impressions. Of all persons the educator should clearly understand that the child's eyes should be optically accurate at the very commencement of his educational career.

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It is instructive to note the changes which may take place in the shape of the eye-ball as the growth of the body progresses.

It is a well-known fact that between the ages of 5 and 18 physical growth is very rapid, so rapid is it in many instances that the nervous system shows marked disturbances, all the vital forces seeming to be more than fully employed in aiding this growth. Coincident with this physiological development we find that an axtra call is now made upon the child's vitality by our system of education.

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Within the past thirty years, there has been brought together by diligent students in Europe and in this country, a vast collection of statistics bearing on the subject of school children's eyes. The paramount necessity for first undertaking these examinations was due to the discovery that myopia or near-sightedness was rapidly increasing among the German school children and students.

Taking myopia as an example, we find that it is not only rapidly increasing in Germany and France, but all over the civilized world. More study has been given to this variation from the normal type of the eye than to any other, or perhaps to *all* other errors of refraction.

Some of the results growing out of this study may be summed up as follows: All physiologists and opthalmologists agree that since the time when examinations of the eyes to determine what the facts are were entered upon, it has bean demonstrated, first, that this increase of myopia has been very marked during the past 20 or 25 years; second, that the first appearance of myopia is coincident with the child's first year in school; third, that with each year's progress in school work, myopia exhibits a proportionate rate of increase; fourth, that it is primarily due to excessive and prolong-

†Extract from article in March number of Pacific Medical Journal, 1897.

ed use of the eyes at the near point; fifth, that it is not congenital, only in so far as all inherited tendencies may be called congenital.

Moreover, on account of the tendency of the myopic eye to increase in length as myopia increases, changes take place in the inner tunics of the eye—the choroid and retina—by which not only are the percipient elements—the rods and cones—displaced and separated from each other, but pathological changes are always imminent.

From the 200,000 or more examinations of children's eyes which have been made up to the present time the following propositions may be formulated, namely: First, myopia is an over development of the eye, usually beginning with the child's first use of his eyes at the near point. Second, it is found in increasing percentage rising steadily with the advancement of school work, and found the least where the least work at the near point is required. Third, according to the degree of myopia the mental development of the child will be more or less retarded.

As year by year the demands upon the eyes in school work has been growing greater and greater, the conclusion is inevitable that to our modern system of education we must turn for the real source of any of these defects.

It has been found that the strain upon the ocular muscles (by which the eyes are drawn towards each other and sustained in that position as long as the two eyes are looking at a point within 12 or 14 inches of the eyes) together with an error of refraction, make a combination such that the child's power of co-ordination becomes exhausted, resulting in too many cases in a variety of abnormal nervous phenomena.

To the unthinking these phenomena are assigned to almost any cause but the eyes, yet, examination of thoae children who break down during school work—who collapse as it were, at the close of some examination—will demonstrate that they are victims of nature's effort to produce results with eyes not suitably adjusted to the work which they are attempting to perform.

From 12 to 14 years in the case of girls is a very critical age, and it is then they so frequently exhibit the first symptoms of eye-strain, though the immediate effects are not directly traced to the eyes or even felt in the eyes. A further examination of these statistics shows that in the older centers of civilization are to be found the highest type of myopic development. If we take for example Germany, as perhaps the oldest community where a system of education from childhood to the most advanced university work, has been the most carefully and scientifically developed, myopia ranges from about 1 per cent in the lowest grades up to 70 or 80 per cent in some of the higher or in special institutions of learning.

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If myopia were the only error of refraction giving us concern, it would be a sufficient reason for the interest we ought to take in this subject; but there are other physical departures from the normal, such as hyperopia and astigmatism which are capable of exerting as great or greater influence upon the development of the child than myopia. Since all children born into the world are hyperopic, and a large proportion astigmatic as well, we have an added reason for believing that undue strain put upon the eyes during the developmental stage, characteristic symptoms will become marked, indicative of serious disturbances of the nervous system. Such children are obliged to exert a greater or less power of their accommodation from the time they open their eyes in the morning until they close them in sleep at night. This constant strain upon the muscle of accommodation and convergence is frequently the immediate cause of such disturbances of the nervous system as headaches, asthenopia, fatigue of the eyes, sleeplessness, twitching of the facial muscles. Reflex neuroses, such as stammering, blind spells, paralysis, loss of memory, chorea, gastric disorders, dizziness and vertigo; and such physical phenomena as hallucinations, night terrors, seeing of bright lights and flashes are examples.

The typical hyperope presents fully as marked physical characteristics, and even far greater pronounced subjective symptoms of his condition than the myope. As we have seen the eyes of the myope are over-developed, those of the hypermetrope, on the contrary, are undeveloped, there is in fact an arrest of development. The eyes of the hyperope resemble the eyes of the lower races and animals which are nearly always hyperopic.

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The face of the typical hyperope is very characteristic. It presents a flat appearance which is due to the shallowness of the bones of the orbit, it may also be asymmetrical, one side being visibly smaller than the other. The nose is smaller than the normal, and the bridge may be so flat that it is with great difficulty that spectacle frames can be adjusted. The eye-balls are also smaller than the normal and flattened in the antero-posterio diameter. Convergent strabismus is a common accompaniment.

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Hyperopic children are given to scowling and wrinkling their forehead. The retinal images in a hyperopic eye being indistinct

the eyes are held as close as possible to the book, this gives an enlarged though not very distinct image. As they often hold their book close to their eyes they are thought to be myopic.

Unlike the myope who obtains a perfectly clean image of *near* objects, the hyperope has upon his retina indistinct images due to circles of diffusion. In holding his eyes close to his work he does so to get an enlarged image. On the other hand the young hyperope will, as a rule, see *distant* objects distinctly. His focus being behind the retina, it can be shortened by action of the muscles of accommodation. This causes the lens to become thicker in the center.

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More scientific and accurate means for measuring the corneal curvature has served to disclose that eyes with astigmatism are more common than eyes without. It is a very frequent cause for certain forms of headache of a neuralgic type. The attempt of the muscles of accommodation, or focus muscles, to overcome this defect by acting with unequal tension upon the lens, may be the direct cause of these peculiar reflex conditions.

"Is an education obtained at such cost to health and comfort really worth the outlay?" When it is considered that at least 90 per cent. of all this terrible loss of vital nerve energy is absolutely needless, the great wrong to the individual and to society by reason of this neglect will be appreciated.

Do you imagine that the thin, pale, anæmic, listless boy or girl who comes home from school every afternoon complaining of tired feelings, headache, fretfulness, and a host of other distuabances so familiar to you all, is the better for his hours spent in schools?

He is probably suffering from some refractive error which should be corrected with glasses at the earliest possible moment, else the time spent over his studies will be worse than wasted. Until this is done he cannot hope to be on a par with his more vigorous schoolmates.

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Children are not born myopic, but the tendency to it is inherited in a vast proportion of cases. Children of myopic parents become myopic much more quickly than do children born of parents having normal or approximately normal eyes.

Most hyperopic children, unless the hyperopia be very great, have normal vision. This is a most important fact to bear in mind, for herein lies the stumbling block which prevents the ordinary observer from recognizing the relationship which may exist between the many peculiar nervous phenomena witnessed in children and the state of their eyes.

This matter of visual acuteness is too important to be passed over lightly for several reasons, the principal one is that a test of his eyes by asking a child to read certain letters at a distance of twenty feet, the method commonly employed by examiners of children's eyes, is unreliable. As a matter of fact the so-called chart test possesses but limited practical and less scientific value as a test for refractive error. By it we simply learn the one fact that some children have better vision than others, or to put it another way, we are able to pick out those children who have vision less than normal. We are also able approximately, to detect those who are near-sighted.

The chart test can never reveal the number who are hyperopic or astigmatic, for at least 78 per cent. of these cases have normal vision.* We are therefore safe in saying that the chart test gives totally unreliable results.

The teacher who expects to discover among her pupils those who need glasses by testing their visual acuteness will be disappointed. Those most needing glasses may be just the ones who can read the smallest test letters. We say, then, that this ability to read the test letters at twenty feet is not at all incompatible with a high degree of refractive error. It also disproves the prevalent idea that the necessity for glasses ought to be indicated by loss of visual acuteness. An examination of children's eyes by the objective methods is the only reliable scientific test. Paralyzing the accommodation, the use of the ophthalmoscope, Javal's ophthalmenter and skiascopy or the Shaddow test should be employed in *all* cases.

The child's environment must be taken into account; his life at home, character of his foood, exercise, etc., are features not to be neglected, But all this means special training, which should not be expected of public school teachers.

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We need then, first of all, legislation which shall provide for an examination of every child's eyes before commencing to go to school. This can only be done by persons trained in the work and by the most scientific methods, for but little good can come from examinations otherwise made. * * * The subject is, however, one requiring such highly specialized knowledge that teachers can never be expected to make the examinations themselves, Children ex-

*Analysis of 1,300 cases of errors of refraction in "The Modern Eye" by the author of this paper.

hibiting unusual phases of nervousness, inattention, restlessness, etc., or those who hold their eyes too closely to their books, who stumble over their reading, either from the distant blackboard or their books, should be looked upon as good subjects for such examination.

We should recognize the fact of the eye's limitations; that their capacity for work, especially at the near point, must be gauged by other standards than mere acuteness of vision.

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The outlook for the future of our race rightfully fills us with alarm unless the proper course be taken to alter present conditions.

As an optical instrument we have found that the eye is very often full of imperfections, it is either too long or too short, and it has spherical aberrations Its defects produce reflex and disturbances in many portions of the body.

Helmholtz says that an optical instrument containing as many imperfections as does the eye would be thrown aside as useless, yet, with all its imperfections, the eye, it must be granted, is the most wonderful of all optical instruments for quickness and ease of adjustment for all distances, for its wonderful motility and its wide visual field.

In a word, "the adaptation of the eye to its functions is therefore most complete.

The Present Problem in Dietetics; Food Preparation, or How Good Health Waits on Good Cooking.

Before the meeting of the Wisconsin State Medical Society, May 5th, 1897, in the Section on State Medicine and Hygiene, Dr. L. M. Squire, of Poynette, presented a timely paper on the general need of better cooked food, not only to maintain good health, but to assist us in the cure or comfort of patients. In some respects it is a brief review of the Hon. Edward Atkinson's admirable book entitled "The Science of Nutrition," which, through the generosity of Mr. Andrew Carnegie, can be found in most of our high school and college libraries.

The writer purposely omits discussion of the Pure Food question, which he regards, in the light of progessive legislation and the recent triumphs of Milk Pasteurization, a settled problem. Likewise the "how, when, what and how much to eat" questions are left to others.

After describing statistically the importance of food itself in our daily life (50 per cent. of our time, wealth and population required to raise, transport, manufacture and purchase it for our tables), he defines good health and asks for a higher standard for our coming generations who should have "less dissipatory athletics and more instruction how to maintain athletic form" for the busy needs of life.

The therapeutic, as well as the prophylactic value of food is touched upon; two great classes of patients, depending upon us for help, incurables and dyspeptics.

As to the origin of bad cooking, he quotes Mr. Atkinson, who calls particular attention to "the misdirected efforts of infernal machine (stove and range) manufacturers to ventilate ovens to draw off the vapors of food, which is precisely what ought not to be done when the heat is perfectly regulated. Witness also the efforts to enable one to cook quickly, which is absolutely wrong nine times out of ten if nutritive values and digestibility are desired."

As to the merits of slow cooking Atkinson further says: "This evil (apropos to Dr. Pavey's objections to high temperature for fats) can be avoided by my method of cooking. I have on record many instances of the cure of indigestion by the substitution of food cooked slowly at a moderate heat according to my methods, proving conclusively Dr. Pavey's position. I have also two records of very puny children who needed meat but could not digest it as ordinarily prepared. Since the adoption of my oven they have become stout and strong. I have become satisfied that about half the prevalent dyspepsia is due to semi-starvation, because the victims cannot digest badly cooked food."

WINTER'S FORMULA FOR GOOD COOKING.

Pure Food plus ',Gumption" (in mixing, &c.) plus Heat *Controlled* (a, Double Box "Aladdin Oven; b. Large Wick Lamp and 150 deg. Oil: c. Constant Temperature—average 300 deg.) plus time (slow—3 to 24 hours) equals nutritious, savory, digestible food, economically heated, without discomfort, worry or constant attention.

In conclusion he calls attention to the usual errors in prescribing foods for invalids, mentioning the careless and over cautious especially, who forget that weak patients must not have solids, and that in a liquid ration the man chemical proportions (Proteid, Starch, Fat) must be present else the patient will starve.

The Aladdin Oven, Mr. Atkinson's invention, having paid for itself, is not patented except its name. Mr. A. encourages any one to make it, and cites its success in the Tuskeegee, Alabama, Industrial School (home made) and its use in the best families of Boston and New York, being particularly proud of the Havemeyer kitchen erected for the poor on his plans by the late T. A.

Havemeyer, who spent $6,000 for this model cooking depot; and Atkinson actually dreams that some day our schools will have a kitchen curriculum and lunch room that shall destroy the baleful corner restaurant.

Note on the Treatment of Anemias.‡

The evolution of organic iron compounds has been interesting both from pharmaceutical and clinical standpoints. The scale salts were the firft to attract attention, and their superiority over the inorganic preparations soon became manifest. The hydrated succinate then came into favor, and later the "albuminates" were introduced—indefinite mixtures, whose solutions readily coagulated, even spontaneously. In Gude's peptonate of iron and manganese we have a stable and palatable preparation, uniform in composition and therapeutic in effect. Theoretically it would seem that iron could only be of service in chlorosis; clinically this rule does not hold good. I have used pepto-mangan Gude some five years with good results, and beg leave to report the following cases:

Case I. Mrs. C., aged 31; hemorrhage following an obortion at fifth month. Saw the patient several hours after the accident almost exsanguinated and delirious. Hemorrhage was stopped by curetting. She rallied nicely; no transfusion. Next morning found her very weak; no blood examination permitted. Was put upon pepto-mangan Gude, tablespoonful three times a day, milk and beef tea. At the end of a month the blood count was 4,800,000; hemoglobin seventy per cent. Although she felt entirely well, pepto-mangan was continued. At the end of the third month she menstruated as usual.

Case II. Mrs. K., aged 29; had had a miscarriage two months before, but had lost very little blood. Dr. W. W. Taylor had assisted at the management of the case, and no curettement had been deemed necessary. There had been no fever, but patient was steadily losing ground. Blood count 3,200,000; hemoglobin not estimated. She received the same nourishing diet as before and pepto-mangan Gude. At end of five weeks (June 3, 1892,) her blood contained 4,300,000 red cells to the cubic millimeter (had no hemometer at the time). She was able to be up, had a fair appetite, and was gaining daily. She went North on a trip, and no subsequent count could be made, but looked better than for a year past on her return.

Case III. Mrs. L., aged 50; "nervous break down;" had been treated unsuccessfully for two years; had also had morphin habit. Red disks, 2,800,000; hemoglobin forty per cent. Treatment: Pepto-mangan Gude (tablespoonful three times a day), strychnin hypodermically, phosphide zinc (one-fourth grain t. i. d.) After seven weeks she was able to take short walks, and had gained eighteen pounds. When she returned home the hemoglobin percentage was sixty-five; count could not be made, as I had not brought my cytometer. She was instructed to continue the treatment at home.

Case IV. Aged 35, male. Was treated at my sanitarium for opium habit, but owing to business pressure had to leave for home before fully recovered. He returned in three weeks to be "built up." Had hot and cold flashes, insomnia, was very nervous. Red cells 2,320,000, some microcytes and platelets; hemoglobin 45 per cent. Took pepto-mangan but had to go home in two weeks, continuing the treatment. Four weeks later he wrote: "Am feeling better than for years; have gained flesh steadily since I left." (I am sorry not to have been able to examine his blood again).

Case V. Miss R., aged 19. Chlorosis. Red cells 4,160,000, hemoglobin 40 per cent. Pepto-mangan seven and a half weeks. Result: red cels 4,720,000, hemagloben 90 per cent.; great subjective improvement.

I have given pepto-mangan Gude to many other patients with benefit but have no record of blood examinations. Among these were one case of chronic gastritis with hypochlorhydria complicating malaria; one of hysteria (male, æt, 19), three cases convalescent from opium treatment, two of senile debility, two of chronic nephritis, and one of tuberculosis.

Note.—Case three relapsed after returning home. Six months later she returned and blood examination left no doubt of her having progressive pernicious anemia. Bone marrow, arsenic and mercury had no effect. Pepto-mangan Gude was used again with slight temporary subjective improvement.

‡Dr. Wm. Krauss in Memphis Medical Monthly.

Cretinism.

At the last meeting of the Tri-State Medical Society, held in St. Louis, April 6th, 7th, and 8th, Dr. H. H. Vinke of St. Charles, Mo., presented a cretin who had been treated for the past year and seven months with thyroid extract. Photographs were shown of this case taken at the beginning of treatment, and a number of photographs of other cretins showing to what extremity

cretinism will reduce man. The essayist referred to the ultimate results of thyroid feeding in cretinism in general, and spoke of this case as follows:

This is a case of congenital cretinism; he came into the world with unmistakable marks of cretinism, after a tedious labor lasting three days, and after a gestation lasting ten months. There is reason to believe that in congenital cretinism gestation is always prolonged. When first seen he was six years old and presented all the classical symptoms of cretinism. The stunted figure, the enormous head, the broad fabe, the sunken bridge of the nose, thick protruding tongue, the thick everted lips, the myxœdematous condition of the skin over the entire body, the protruding abdomen, the marked lordosis, etc., gave him a hidious and characteristic appearance. Together with these ugly deformities of the body was found a condition of the mind bordering on idiocy. His hight was then 33½ inches. He could walk only a few steps in a wabbling manner and would stumble and fall down upon the slightest provocation. His vocabulary was limited to a few words, which could only be understood by his parents. He was listless; took no interest in the plays of other children; and would sleep 16 to 18 hours out of 24 hours. Immediately upon the exhibition of thyaoid extract he began to improve. The ugly deformities of the body began to disappear; the face assumed a more intelligent expression; he became bright and more restless and delighted to play with his brothers and sisters, can walk now with ease for a long distance, but there is still a noticeable awkwardness about his movements. His intellect has improved greatly; he can utter entire sentences in an intelligible manner and his parents intend to send him to school now. He probably has a degree of intelligence of a child of four years. He has grown nine inches during this time, 9 inches in one year and seven months. The growth of a cretin during this period would probably not amount to one inch, and the growth of a normal child at the same age would probably not have exceed 4 inches. He has taken uninterruptedly an amount of thyroid extract equavalent to 15 grains of the fresh gland a day. The dose of the fresh thyroid gland obtained from healthy sheep is from 5 to 10 grains a day for a child up to 2 years, and from 10 to 30 grains a day beyond that age. As much as 60 grains a day for a short time has been given.

Stone in the bladder may be diagnosticated by attaching the phonendoscope to the sound.

Fibroid Tumors of the Uterus.

The favorable action of thyroid feeding in myxœdema, goitre, and obesity, has led to an extension in the scope of this treatment, and it is so employed with more or less success in a variety of other conditions. Although it has not yet been utilized to any extent in gynecology, the reports thus far published are sufficiently encouraging to warrant a more general trial of thyroid therapy. According to some recent observations it has a distinctly beneficial effect in fibroid tumors of the uterus. Jouin (cited in Amer, Journ. of the Med, Sciences, Oct. 1896) found in the case of an obese woman suffering from a large uterine fibroid that thyroid feeding not only reduced her weight, but at the same time greatly diminished the size of the tumor. After testing this treatment in seventeen other cases he concludes that it causes a marked reduction in the size of uterine fibroids, while the symptoms-pain, pressure, general weakness, and especially hemorrhage are certainly relieved. Lately, Dr. A. Lutaud of Paris, (Jour. de Medic., Times and Register, March 20th, 1897) has called attention to the value of iodothyrine the active principle of the thyroid gland, in the same class of cases. He observed that women suffering from fibroids with hemorrhages were always benefited as the drug has an incontestable hemostatic effect. Besides, even if the tumor itself is not diminished the neighboring tissues are relieved of their congestion, the compression of the surrounding organs ceases and their functions are more readily accomplished.

Important Therapeutic Uses of Fairchild's Essence of Pepsine.

Fairchild's Essence of Pepsine aids the administration and remedial action of drugs and chemicals which disturb the stomach and impair digestion. It is indispensable to the continued successful use of the mercurials, iodides, sodium salicylates, etc. It is helpful also in the toleration of morphia, allays nausea and vomiting.

Fairchild's Essence of Pepsine, made direct from the fresh rennet of the nursing calf, is of peculiar value in infantile indigestion, as a stomachic, antiseptic and corrective.

The milk-curdling ferment has a distinct physiological action in the infant's digestive economy. It renders the curd more flocculent and digestible.

Whey, prepared with Fairchild's Essence of Pepsine, contains all the soluble constituents of the milk, separated from caseine

and fat, and is therefore a valuable "rest" food under conditions so favorable to fermentation that whole milk must, for the time, be avoided.

Junket (made with Fairchild's Essence of Pepsine), a soft, jelly-like curd, is a delicious food for the invalid, giving the sense of substance craved by the convalescent, yet readily diffusible in the stomach, and very digestible.

Three Cases of Intestinal Obstruction Relieved by High Injection of Olive Oil.

In the Medical Herald for march there appeared an interesting article by Dr. Charles H. Wallace for the relief of intestinal obstruction by the high injection of olive oil. The writer reports three cases. Two of the cases were due to a stain by lifting, the other by patient slipping and falling on the ice. In all the cases there was severe pain, intense nausea, and frequent attempts at vomiting, the breath having a stercoraceous odor. In two of the cases the tumor was easily recognized by examination, but in the other case the abdomen was so sensitive to manipulate that palpation was impossible. Here the diagnosis of intestinal obstruction was made from the history and symptoms.

The method of procedure was given as follows: the patient's hips were elevated and a good sized rectal tube was passed five or six inches up the bowel, to which was attached a fountain syringe, containing four pints of olive oil at a temperature os 104 deg., and with a pressure of six feet, the buttocks were compresied to prevent the return of the oil, then gentle massage and kneading was used along the course of the colon as the oil began to proceed toward the seat of obstruction. After most of the oil was used the tube was gently removed and the patient put to bed. In from two to six hours the oil mixed with fecal matter passed away and continued until entirely expelled. There was almost instant relief after the oil had distended the bowel, with a cessation of the hiccoughing and nausea and in no case has there been a return of the trouble.

The author remarks that the indiscriminate use of the oil might prove harmful in some cases but they are in the minimum, The unirritating and burrowing properties of the oil suggest its use in almost all cases of acute intestinal obstruction before softening of the gut takes plcce.

Granting as some might say that it would increase the twist in volvulus, yet it would not make the case more unfavorable for operative procedure.

The advantage of olive oil over gas or water are that it slowly distends the cut, does not irritate the bowel or is not so likely to be expelled while being used. In closing he advises the importance of making use of this comparative easy and safe method before operative measures are resorted to in a class of cases that is not uncommon, and in an affection that so often proves fatal,

The Relation of Pleasure and Pain in Consciousness.

The paper read by Dr. H. Gasser, at the meeting of the "State Medical Society of Wisconsin," May 6th, was an argument showing the Relation of Pleasure and Pain in Consciousness. How the efforts of those looking for special nerves of pain will probably be fruitless, because they are away from established general principles. That we cannot account for them on the theory of development, biology, or heredity, because the conditions that cause pain, especially of a definite kind, are not constantly repeated, and the tendency to fade out even as a memory is the rule.

He then elaborated the idea that there is a circulation of the nervous system as definite as that of the circulation of the blood. That the forces of the external world enters into us by the channel of the senses, modified by the tissues through which they pass and again merge from the body as manifestations of motor power.

That pain is not an entity, a something inherent and distinct, but a relative sensation, a form of feeling that comes into consciousness as a constituent in the equilibration of the various bodily functions in the cortex of the brain.

The pain, for instance, in the fingers of an amputated upper extremity is a fact in consciousness. That while we know the pain is not in the fingers, and no not feel it in the brain, yet consciousness says so, and it also causes great suffering. The nerves supplying the fingers were injured at or above the line of amputation, with a continuance of the peripheral function, making the circuit in the disturbed cortical cells complete and causing a renewal of the sensation of pain.

That there is no such a thing as a pain centre; also that there is no local center of consciousness in the cortex of the brain. That the simplest sensation is always relative with the whole, and, therefore, interpreted by no two alike.

His theory of the circulation of energy of the nervous system simplifies in many ways our biological and physiological conceptions,

but it seems of special value in the field of psychology.

In this very brief review it would be impossible to get a comprehensive conception of the theory advanced, and while it is interesting, it needs more thoughtful investigation before it can be generally accepted.

Clinical Observations on Diuretin.‡

After giving a short description of Diuretin and considering the indications for its use, the authors report on some of the cases treated with Diuretin by them, a detailed accounnt of which forms the contents of the work. From the history of cases we copy the following:

CASE 1.—Male, 21 years, with Mitral Incompetence. Has suffered four times with acute articular rheumatism, and presented himself suffering from palpitation, dyspnœa, headache, and frequent vomiting. The lower limbs and feet were somewhat swollen. The patient showed no improvement after administration of Caffeine and Tincture Strophanthus; the dyspnœa increased, together with the œdema, which appeared also on the arm. He also complained of pain and tension in the hepatic region, The quantity of urine amounted to 700 Ccm—1,200 Ccm., occasionally increasing to 1,500 Ccm. The use of Diuretin was then commenced.

Daily quantity of urine.	Treatment and Remarks.
1,250 Com.	
1,700 "	gm. 6.0 Diuretin administered from now on daily.
2,800 "	
3,400 "	
2,000 "	Œdema has decreased. General condition much improved.
2,900 "	
2,800 "	
2,500 "	
2,100 "	

After discontinuing the Diuretin the amount of urine dropped in 6 days again to about 600 Ccm. Under the influence of Digitalis this amount rose to about 1,200 Ccm.—1,600 Ccm., but the œdema rapidly increased very considerably, spreading to the thighs and face. The dyspnœa also increased. The face became cyanotic and the area of hepatic dullness extended almost to the navel. Diuretin was again resorted to.

Daily quantity of urine.	Treatment.
1,000 Ccm.	gm. 4.0 Diuretin administered daily.
2,200 "	" " " " "
2,750 "	" " " " "
2,100 "	" " " " "
3,800 "	" " " " "
2,900 "	" " " " "
2,700 "	" " " " "
2,200 "	" " " " "

The œdema and dyspnœa again disappeared, the Liver became normal and the patient was discharged as cured.

CASE 2.—Male, 53 years. Aneurysma Aortæ. Incompetence of Aortic Valve. Patient was exceedingly pale, with cyanosis of ihe lips, and had frequent attacks of dyspnœa with anginal symptoms. His legs were œdematous, liver enlarged and painful. During 12 days patient was given 3 times a day a subcutaneous injection of 0.25 Caffein Sodium Benzoate. At the end of this period the angina, palpitation of the heart and severe attacks of kyspnœa still persisted; the patient became sleepless and the œdema had extended over the entire body. Diuretin was then resorted to.

Daily quantity of urine	Treatment and remarks.
200-300 Ccm.	
1,600 "	6 gm. Diuretin administered daily.
1,800 "	6 " " " " " Some headache.
2,000 "	6 gm, Diuretin administered daily.
2,200 "	6 " " " " " Œdema almost entirely hisappeared.
2,000 "	6 gm. Eiuretin administered daily.
1,900 "	6 " " " "
1,400 "	4 " " " " Œdema entirely gone.
1,700 "	4 gm. Diuretin administered daily.

Patient looked upon himself as cured and insisted on leaving the hospital. He had no œdema, no dyspnœa and during the Diuretin treatment no asthmatic attack.

In addition to the prompt action of the Diuretin in this case, the author calls particular attention to the fact that the severe cardiac asthma which had troubled the patient for several weeks and robbed him of his sleep, had during the Diuretin treatment disappeared entirely.

CASE 4.—Coachman's wife aged 48. Suffering from Mitral Insufficiency with face, hands and feet cyanotic, general œdema and ascites, palpation of the heart, dyspnœa, and sleeplessness,

Daily quantity of urine.	Treatment and remarks.
800 Ccm.	Infus. Digitalis (1.5:200) given 3 times a day in 1 table-spoonful doses. Caffein sodium benzoate 3 times a day 0,25 for dose.
1,000 Ccm.	" " " "
999 "	" " " "
1,000 "	6 gm. Diuretin administered daily.
1,700 "	6 " " " "
3,500 "	6 " " " "
3,150 "	4 " " " "
2,800 "	4 " " " "
2,100 "	4 " " " " No cyanosis. Asthma disappeared. Pulse full and regular. No œdema.
2,200 "	4 gm. Diuretin administered daily.
2,300 "	4 " " " " General condition good.

The patient had during the first few days headache and vomiting as a secondary effect of the Diuretin,

Further, in a case of Arterio-sclerosis and Hypertrophia Cordis in a 70 year old man, after Digitalis had been used without mentionable relief, Diuretin worked exceedingly well, causing decrease in the hepatic swelling and disapearance of all œdema; while in a case of acute nephritis the result

‡Von R. Sievers and T. W. Tallquist, from the Mary Hospital at Helsingfors. [*Finski Lakar. Handl. Vol. 39, Chapter VI, 1896.*]

was very gratifying. In two cases of amyloid kidney the Diuretin was given without results, as also in a case of chronic peritonitis with ascites and œdema,

The author deduces from his observations, that Diuretin in heart and valvular troubles is a very efficacious remedy, and in cases where Digitalis and Caffein are used without success, Diuretin must be employed. The question as to whether Diuretin acts on the heart or kidneys,cannot be decided from these trials, but the author is inclined to look upon its action on the heart as secondary. Of special importance is the favorable action of Diuretin in Cardiac Dyspnœa and Angina Pectoris.

The diuretic action of Diuretin is geneeally manifested within 14 hours and reaches its maximum in from 3 to 5 days. If no effect is produced during the first week of treatment the case is not a proper one for the use of Diuretin.

The Extremes of Nasal Surgery.

Dr. J. P. Thorne, of Janesville, Wis., read a paper on "The Extremes of Nasal Surgery" at the Wisconsin State Medical Society meeting at Racine May 5. The following gives the principal part of the paper:

The rapid and remarkable progress of rhinology during the past few years has resulted in considerable variance of opinion regarding nasal surgery. This variance is not an indication of confusion but shows different minds working along different lines for the same desirable end—the utmost possible good to the patient.

In previous years not enough attention was given to nasal diseases but today the majority of the profession recognizes the importance of nasal diseases, not alone for their primary local effects but also for their secondary effects on the eyes, ears and the accessory parts, their effects often on the general health and their reflex manifestations.

Nasal surgeons can be conveniently considered in three classes—those who do too much surgery with not enough attention to hygiene and general treatment, those who do not do enough operative work and those who do all the surgical work really required, giving proper attention to details, but who are conservative enough not to perform unnecessary operations.

The first two classes are those who are practicing the extremes of nasal surgery. The latter class today represents a large proportion of those engaged in the practice of rhinology. At the present time the mean between the two extremes is being reached.

The object of nasal treatment should be to restore the nose to its normal condition as nearly as possible. The relationship and functions of the parts should be as perfect as we can make them.

A few years ogo we often heard of many remarkable quick cures. A case with nasal obstruction and its attendant difficulties came along and everything which extended into the nasal passages was removed. Nasal obstruction was immediately relieved, a brilliant cure reported and probably the case dropped out of sight; but this was not the end, instead of everything being lovely with the patient, an atrophic rhinitis and a pharyngitis sicca resulted from this extreme nasal surgery. This occasionally happens today but not with the frequency it did a short time ago. The mucous membrane and turbinals have functions to perform and have an important place in the nose. They warm, moisten and cleanse the respired air and as much mucous surface was possible should always be preserved.

The proper thing for us as nasal surgeons is to adopt lines of treatment which give the best and most permanent results.

While preparing this paper I wrote to a number of rhinologists in different cities who are considered authoritative and obtained their views on the subject. One question which I asked several was: "What per cent. of cases of nasal disease are cured without any surgical treatment?" The answer from all was "almost none," so we need give little attention to this extreme.

In putting the nasal passages into a normal condition the following are our general outlines:

In all cases the general health should be improved to its highest standard. All constitutional dyscrasiæ should receive attention such as rheumatism, syphilis, tuberculosis, &c. The hygienic condition of the patient and his surroundings should be the best possible. Such local medication as the parts need should be used. Any tumors, if present, and septal deformities and excrescences, if of any size, should be removed.

Hypertrophies of the turbinals should always receive proper and careful attention; as this is a condition so frequently encountered and on the treatment of which opinions differ I will give it some attention. True hypertrophy of the turbinals must always be removed by some method or we shall not make a success of our work. After treating many cases by different methods and watching the results for a series of years in my own and others' patients, I have seen the best and most lasting results

from the proper use of the galvano-cautery. I reduce hypertrophies of the inferior tubinal by a careful submucous linear galvano-cauterization. By this method I destroy very little mucous surface but do destroy the new cellular growth which must be removed in some way.

In treating the middle turbinal care must be used with any method, but the galvano-cautery is a sucess if carefully used.

The reason the galvano-cautery has fallen into disrepute with some is because they have burned through the nose indiscriminately destroying a large mucous surface and are now reaping a benefit of trouble from their extreme cautery work, The following from a recent letter from Prof. Joseph S. Gibb of the Philadelphia Polyclinic represents the opinion of a large number of the profession today.

"Anterior hypertrophies, if very large, I remove by scissors or transfixion and snare. Much the larger number, however, I treat by galvano-cauterization. Posterior hypertrophies, if large, are removed by snare; the smaller by galvano-cautery. In answer to the question 'How much do I use the galvano-cautery?' would say I use the galvano-cautery in by far the larger number of cases of hypertrophy of the turbinals."

While many good operators are using chromic acid, yet I do not think it equal to the galvano-cautery *properly* used. Chromic acid as generally used causes a large superficial slough destroying too much mucous surface; it is apt to be followed by considerable inflammatory reaction and often causes systemic poisoning. If used, the method of submucous cauterization advocated by Dr. Norval H. Pierce of Chicago is preferable, but even then I believe the galvano.cautery is preferable and will be in use when the chromic acid treatment has become a thing of the past.

I have thus briefly outlined some of the general principles of rhinology which in my opinion will produce the results we are working for—the permanent good of our patients.

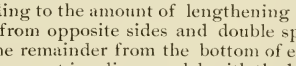
Rhinology today occupies an honorable position and by careful attention to hygiene, general and local treatments and appropriate surgery, we can add to the lustre of our science. The successful nasal surgeon avoids all extremes, uses good judgment, practices conservative and good surgery and conquers the difficulties before him, thus benefitting his patients and adding to his honor and to the honor of our great profession.

Operative Treatment of Talipes.

In a paper read before Tri-State Medical Society at St. Louis, Mo., April 6 to 8, '97, Dr. C. E. Ruth, M. D., of Keokuk, Iowa, said:

We will consider only those cases in which from the age of the individual and severity of the deformity, we cannot expect success without operative interference, including tarsal resection. No ordinary aseptic precautions will suffice here, owing to thickness of the epidermal layer of the sole of the foot and consequently the depth at which septic and fœtid germs may be lodged. In extreme cases of talipes equino-varus in which the toes are directed inward and backward with the bottom of the foot looking upward and backward the long flexors and even the dorsalis pedis artery are so far displaced inward that the mid tarsus can be entirely sectioned without injury to any of them.

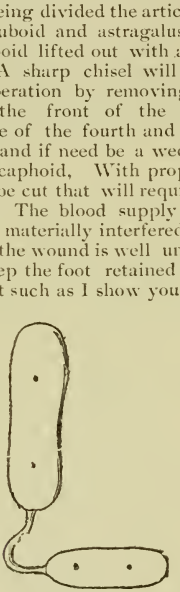
The intra uterine position of the foot with early ossification of the oscalcis and cuboid which from the entire outer portion of the tarsus, with slow ossification of the scaphoid, middle and internal cuneiform all favor the development of varus and permanent deformity of the tarsal bones. The consequent rotation of the tarsus may amount to over ninety degrees in two directions, viz. axial and adduction. Because of late ossification the scaphoid suffers the greatest distortion. The scaphoid is the key to the arch of the foot and its articulation gives the geatest movements of the tarsus. In all mid tarsal resections for talipese the articulation between the head of the astragalus and the scaphoid should be obliterated and replaced by boney union. This is doubly important because movement at this articulation gives the first step in all stages of varus and valgus, making their complete development possible. In cases to old to expect forcible replacement to be successful the *tibialis posticus always*, and often the tibialis anticus also should be lengthened *not* sectioned.



Lengthening should be done by cutting the tendon two-thirds off at different levels, according to the amount of lengthening desired, from opposite sides and double splitting the remainder from the bottom of each transverse cut in a line paralel with the long axis of the tendon towards the other, but never quite out at the end. The tendo Achilles should be sectioned subcutaneously. No fears need be entertained regarding its repair as it has its own special blood supply. All tense portions of the planter fascia should be sectioned as may be needed

to overcome their agency in maintaining the clavus.

The dorsal incision should extend from immediately in front of the inner maleolus to near the tubecle of the oscalcis, which is the guide to the tendons of the peroneus longus and brevis. The outer end of the incision should turn sharply backward. As the tendons of the extensor longus digitorum, peroneus tertius, and the dorsalis pedis artery are exposed they should be drawn inward while the peroneus longus and brevis are drawn outward. The extensor brevis digitorum being divided the articulation between the cuboid and astragalus is opened and the cuboid lifted out with a periosteal elevator. A sharp chisel will soon complete the operation by removing the cartilage from the front of the astragalus, oscalcis, base of the fourth and fifth metatarsal bones and if need be a wedge shaped piece from scaphoid, With proper care no vessels will be cut that will require ligation or twisting. The blood supply to the foot has not been materially interfered with. Until repair of the wound is well under way I prefer to keep the foot retained in position with a splint such as I show you



SPLINT.

to avoid the danger of pressure sloughs which often occur from the immediate application of a plaster cast. Much can be done in the application of a bandage for the correction of the deformity. The splint is made of a flexible steel shaft with two plates of sheetiron riveted on so that it can be moulded to both foot and leg. Within one or two weeks a plaster cast should be applied in over correction of the deformity and allowed to remain for from four to eight weeks as may be required to get firm union of the tarsas. This of course lessens the elasticity of the planter arch but does not interefere enough with the movements of the foot to be a noticable detriment in walkIng. The shoe sheuld be made with a steel arch extending from heel to toe with high counters extending forward so that when the shoe is tightly laced it gives a firm support to the foot at all points. With ordinary mechanical ability on the part of the surgeon this operation will give good results in all these cases however extreme may be the deformity.

Habitual Constipation in Adults and Young Babies.

There was read at the annual meeting of the Missouri State Medical Association, held in St. Louis, Mo., on May 18th, 19th and 20th, 1897, a paper on Habitual Constipation in Adults and Young Babes, by Dr. J. M. Perkins, of Lebanon, Mo.

He set forth in his article a theory based on his own experience of 17 years study of this very agravated trouble. The article is entirely original and based entirely on his part on a different line as to the cause and curability. His experience is limited, he claims, being only a country practitioner, and not having the opportunities of learned city physicians, either in education or clinical work. Yet he claims to have treated over 100 patients with a remarkable success by his plan, and says he intends to continue until something better is advanced or presented.

He asks in his article that the medical profession try his plan of treatment and keep a clinical record of cases treated, and report to him directly of their success, that he may at the next annual meeting present the result in a clinical paper. We hope our patrons of the Journal may give his plan a careful trial and so report.

He claims that the people in general drink too little water, causing an accumulation of an over amount of uric acid and neglect to be regular at a definite specified term to evacuate the bowels is the causes of habitual constipation, where you have no organic disease of the system to contend with.

He claims that habitual constipation has a multiple of diseases accompanying it of which is often due entirely to constipation, namely: Deranged digestion of stomach and alimentary canal, torpid liver, palpitation, tachycardia, brachycardia, neurasthenia, prolaps uteri in females, hemorrhoids, prolapsus rectum, deranged portal circulation, insomnia, vertigo, diarrhœa in aged, dyspepsia in its different phases, many skin troubles, irritable bladder and prostate, and many others.

He sets forth his plan of treatment as applicable to young babes as well as adults, placing his reliance in dilatation of sphincter ani muscle, in obstinate cases twice a week, but once a week is generally sufficient.

As the cause of the trouble in babes, he claims that the mother is usually constipated and has an over abundance of uric acid. The neglect to cultivate a regular time of babe evacuating the bowel, by removing cloth and holding babe where its buttocks may have the warmth of stove or fireplace, emit the heat against the exposed parts. The neglect to cultivate this habit in young babes causes it to contract its sphincter ani muscle to avoid—from natural instinct—the often remaining fœcal discharge in the diaper, causing a hot poultice of which the babe dreads. The result of this over-exertion on the part of sphincter, keeps its bowels from acting for many hours, thereby producing constipation.

The treatment as to the dilatation of the sphincter he claims should be done by finger dilatation as often as the attending physician deem practicable, always looking to the mother's condition and giving her the proper care as well as well as babe.

His mode of treatment is to have adults drink a pint of clean fresh water on arising in the morning, after thoroughly cleansing mouth and throat well. Also same amount two hours after meals three times daily. Dilate sphincter ani muscle once a week with a rectal dilator, but finger preferable. If digestion is poor, give the following. (The papoid used of late instead of pepsin) : Papoid gr. xx; dil. hydroch. acid ʒiij; glycerine ʒss; tr. genitian q. s. ʒiv. Mix. Sig, Half to a teaspoonful before meals in water. Also five to ten grains of soda bicarb two hours after meals. He claims to have cured a number of patients with dilatation only.

He claims to have neither read or seen his theory advanced by any one, and hopes that it may be the means of propagating a more thorough study of the cause and cure of that great eye sore to the medical world.

Iodocrol as a Succedaneum for Iodoform,

At the meeting of the State Medical Society of Wisconsin, held at Racine, Dr. Warren B. Hill, of Milwaukee, gave a talk on "Iodocrol as a Succedaneum for Iodoform."

He said that it was with some reticence that he offered to the profession a substitute for a remedy that had been known 75 years, and in general use for over 15. Iodoform has been regarded as an antiseptic, local analgesic and absorbant. Clinical observation has born out the assumption, but more recent investigation has demonstrated that in the laboratory, Iodoform, not only does not possess antiseptic properties, but is a field in which bacteria may be cultivated, and cultures of staphylococci and streptococci, may be produced from infected iodoform.

The discrepancy between the clinical results, and those of the laboratory have been accounted for in several ways; the most probable being that in the presence of pus, alkaline substances, and fats, iodoform is decomposed and iodine set free, which acts as a germicide. But it must also be borne in mind that it would in this case also be an irritant, which clinical experience has often demonstrated to be the case. Since these facts have been brought before the profession, we have naturally sought something that would take the place of iodoform in surgery, that did not possess the elements of uncertainty and danger that are attributed to iodoform. In the iodide of carvacrol, which is commercially known as Iodocrol, we have such a remedy.

Iodocrol is prepared by acting upon an alkaline solution of the phenol carvacrol with iodine. Carvacrol is an isomer of thymol, differing from this only in the relative position of the hydroxyl group in the nucleus. One part by weight of carvacrol is dissolved in 20 parts of a 10 per cent. aqueous solution of sodium hydroxide. To this solution, kept cool by surrounding it with ice water, is gradually added, under continuous stirring, a 10 per cent. solution of iodine in an aqueous solution of potassium iodide, until no more of a precipitate is formed.

The light, floculent, yellow precipitate is collected upon a force filter and thoroughly washed with water. It is then spread on bibulous paper or porous tiles and allowed to dry at the ordinary temperature of the room. It represents a grayish yellow, or buff colored powder, having a faintly aromatic odor, and melting at about 153 deg. C. It has about five times the bulk of iodoform. It is soluble in ether, chloform, benzine, carbon bisulphide, and the fixed and volatile oils. It is very sparingly soluble in alcohol. It contains 46 per cent. of iodine. On account of its insolubility in solutions of the alkalies, it is assumed that it is the hydrogen of the hydroxyl group which is replaced by iodine. Reduction experiments with the corresponding thymol derivatives have led to the conclusion that these compounds are to be considered as derivatives of the diphenols,

Clinical experience, as well as bacteriological experiment, has demonstrated that this remedy has positive bactericidal properties. It is far more stable than iodoform in the presence of fats and others, and may be used as dusting powder, or in a 5 per cent. solution in colodium, which makes an ideal aseptic and antiseptic dressing for wounds. It has a benign influence on inflamed mu-

cous surfaces, and a 5 per cent. solution in sterilized sweet oil, with or without the addition of menthol, is particularly beneficial in nose and throat work. On account of its solubility and stability in fixed oils it is useful in genito-urinary work.

The product is one in which every Wisconsin man should take pride, as its author, Mr. Urban, is a graduate as well as teacher in the State University, and has brought to the profession a valuable acquisition, in the form of a pleasant antiseptic powder that may banish the smell of iodoform from the doctor's office, and render life more endurable for the patient, and results more certain for the doctor.

The Surgical Treatment of Gastric Ulcers.

At the annual meeting of the Iowa State Medical Society, held at Marshalltown, May 19th, 20th and 21st, Dr. Van Buren Knott, of Sioux City, read a paper upon "The Surgical Treatment of Gastric Ulcers."

He took the ground that while brilliant results have been obtained through surgical intervention in many cases of gastric ulceration, it should not be resorted to indiscriminately in all cases even though the diagnosis is positive, as spontaneous recovery occurs too often to justify the attempt to effect a radical cure by excision of the ulcer.

But in those cases of gastric ulcer, complicated by perforation, hemorrhage, cicatricial contraction and adhesions to neighboring viscera, or the abdominal wall, surgical interference was urgently demanded. If perforation occurs the sooner the operation the better the result. The abdomen should be opened in the median line, the perforation located and closed by folding in the torn edges with Lembert sutures, and the peritoneal cavity carefully cleansed, first by dry gauze sponging, then copious irrigation with saline solution, and again sponge dry. The suture line should be protected with gauze packing and ample gauze drainage provided.

In those cases where the perforation for any reason cannot be closed, further contamination of the peritoneal cavity must be prevented by gauze packing, and the cavity cleansed and drained. In those cases where perforation takes place slowly and is surrounded by adhesions, as localized abscess results, which should be opened and drained and the rent in the stomach wall closed.

Dr. Knott reported a case of perforation of a gastric ulcer, with adhesion of the stomach to the abdominal wall, attended with localized peritonitis and extreme functional disturbance. He opened the abdomen, separated the adhesions, allowing the stomach to resume its normal position, and closed the opening in its walls with interrupted Lembert sutures, obtaining perfect recovery. He advocates this treatment for all adhesions between the stomach and neighboring parts due to ulcer with or without perforation.

If during the course of a gastric ulcer hemorrhages become so frequent and profuse as to threaten life, if possible the ulcer should be excised and closure effected in the usual manner. If this cannot be done, the stomach may be opened and the bleeding vessel ligated.

Cicatricial contraction of an ulcer, situated at or near the pylorus, may occasion gastric dilatation, with all of its troublesome symptoms, and demand surgical intervention.

The pyloric stenosis, due to this cause, is best relieved by pyloroplasty, which restores practically the normal lumen of the parts.

He closed by emphasizing the care with which the peritoneal cavity must be cleansed and further contamination prevented, and said that alimentation should be carried on by rectum for three or four days; mouth feeding being very cautiously done for some time.

Hysteria.

At the annual meeting of the Iowa State Medical Society, held at Marshalltown May 19th, Dr. P. J. Farnsworth, of Clinton, presented a paper on Hysteria, of which we present an abstract.

Rosinthal says "hysteria is one of the oldest products of civilization, described by Heroditus, Hipocrates and Plato." It is more ancient, it exists among savages and undoubtedly did among prehistoric people. Animals are affected by it apparently, especially horses and cats, Some suppose it to arise from want of co-ordination of the cortex and the medulla, a retraction of the connecting nerves between the motor tract and the origin of the motor nerves. Hence we have cases of sudden general or partial paralysis, and as sudden recoveries. Cramp or spasms may occur from prolonged contact.

In other forms it may arise from weakened action of the cortex, and is alied to insanity, but is not permanent. The will is insufficient or wanting, and there is yielding to any fret or annoyance or fancy, that is not overcome, a supersensitive state that the will yields itself to. It may be brought on by slight physical causes, but its seat is mental, more than physical.

Men become despondent and take gloomy views of life sometimes, with no apparent

reason, have "blues" and commit suicide. A change of scene or excitement relieves them. Stimulants, sedatives and a pressure requiring them to face the world, carries it off. Women are more yielding to these forces from a more delicate organization, and are hysterical. Stimulants and excitement make them worse. It is most common among women, but boys exhibit it. It may be hereditary; some prenatal influences seem to induce it.

Sexual excitement is one cause for the disease, especially in early years. It would be well to have separate schools, and more guarded intercourse at the age of puberty. Parents and teachers should have more more knowledge of the condition of ihe child at that age, and give them useful instruction, at the same time recognize the importance of avoiding exciting things.

Fortitude and self control should be inculcated rather than indulgence and sympathy given, as it too often is.

It imitates every disease and is often hard to diagnose. A little observation sets us right: it enters as a factor with other diseases and is often difficult to discriminate. It causes more distress and suffering to women than all diseases put together. It often seems to be from uterine excitement, but removal of the ovaries does as little to remove the disease in many cases that the antiseptic surgeons have tried, as does orificial surgery that attempts to cure all diseases by dilating the anus.

Habit becomes second nature, and hysteria becomes a habit, sometimes an uncontrolable habit as in hystero-epilepsy. It is a contagious disease, as is seen in schools and communities. Hysteria was called witchcraft in Old Salem and was an epidemic. Bedfast cases occur among young women, but old ones are not exempt from it. It is very difficult for us to divest ourselves of the idea that it is not altogether a simulated disease. It is not a lesion, but a weakness of the brain, and for cure we should recognize its psychical more than its physical character. Sanitariums relieve a class of cases that are able to stand the expense, Dr. Weir Mitchell cures a class of them by his absolute rest and massage by cheerful attendants. Hypnotism is a form of hysteria and relieves some cases. Charcott thought so, but some cannot be brought under its influence. Faith cures are numerous and marvelous, but some have not enough strength of will to get faith. Drugs have little effect except as they absorb the attention, as the emetic does, or to remove some physical trouble. The antispasmodics have a reputation, and the sedatives are sometimes useful. The narcotics are resorted to in desperation, but are ultimately of more injury than benefit, as they become a habit, hence we have the morphine, the alcohol, the cocaine, and many other habits generally induced by the physician at first, No new narcotic or anæsthetic is discovered or announced, but there is a class of people to make a habit of it.

It occurs among all classes, but the acquisition of wealth fosters it: that is to say the poor cannot, in many cases, indulge in the disease, which is developed by more prosperous circumstances. The disease is not probably on the increase, but becomes more prominent as prosperity advances.

We make an advance towards alleviation when we locate the trouble in the cortex and may find better means of treating it, though at present it is like the sailor's kettle, "it is not lost if you know where it is, though it is in the bottom of the sea.

Muscular Fatigue.

Dr. Haig has been experimenting on the cause of fatigue, and has contributed some valuable suggestions to the subject. If we can avoid not only labour longer but more easily and with greater pleasure. He finds one chief cause of fatigue to be the increase of urea in the blood, resulting from the breaking down of nitrogenous substances in the tissues during work faster than the products can be carried off through the kidneys. Urea is an alkaline product, and the greater the alkalinity of the blood the less rapidly can urea be removed by the excretory organs.

One reason why in cold weather we weary less with work is because, perspiring less, the blood is less alkaline and consequently the urea is carried off through the kidneys more rapidly. Correlating this to the question of food we have the following deductions:—An excess of nitrogenous matter in the food promotes the production of an exesss of urea. Now those who consume a large amount of lean meat are sure to generate an excess of it, and unless carried off quickly weariness must result. Dr. Haig says that the scientific deduction is pretty evident that a vegetable diet ought to be the best on which to do muscular work, and this ought especially to be the case during prolonged exertion, and he cites a long distance walking competition in which the winners out of a large number of competitors were vegetarians.

This agrees with what Dr. Carpenter stated in his physiology over thirty years ago, that a vegetable diet rightly composed was quite sufficient for men labouring with their muscles, but he denied it could be for the brain worker.

Lymphatic Glands.

True lymphatic glands are only found in birds and mammals. The thymus supplies their place in the lower forms. There are also lymphadenoid masses in connexion with the kidney of fish; the salamander has lymphadenoid tissue round its liver. In the frog the thymus early changes into fat, and the spleen has no Malpighian bodies, but there are besides the marrow, which is red in the spring, also rudimentary tonsils and the fat bodies in the abdomen, which are during part of the year lymphoid in structure. Lymphatic glands are few and small in rodents, more numerous in the carnivora and ungulates, but most numerous in man (Gulland.) In some mammals, such as the sheep, small glands, intermediate between the spleen and lymph glands, are found in front of the vertebræ in the mesentery and contain blood in them, the so-called hæmolyph gland. But they have not been shown to exist in man. Lymphatic glands are developed relatively late in embryonic life, they do not appear until after the middle of this period—i. e., after the thymus has become developed as a lymphadenoid organ. Lymphatic glands vary much, some having only a single follicle forming a minute mass from 1 to 2 mm. in diameter. There are others with more than one follicle varying in number up to the ordinary compound lymphatic gland. Lymphatic glands undergo retrograde metamorphosis, especially in old age, and turn into fat like the bone marrow and thymus. But at any time they may be excited to regeneration, a compound gland may develop from a single follicle, or a new formation of lymphatic glands take place in connective tissue. The process is the same as in the embryonic formation, leucocytes emigrate into the connective tissue and split up its fibres into retiform tissue. The only difference in the lymphadenoid tissue arising from the excitation of diseased products is that the arrangement of germ centres is not so well defined as in the normal gland.

Lymphatic glands have two functions, the production of leucocytes and the protection of the circulation from the entrance of organisms through the skin and mucous membranes. Organisms may be carried to a gland where they are arrested and ultimately destroyed, or they may grow through the gland, destroying it meanwhile, and so reach the circulation. But those of the highest virulence either enter by the blood-vessels and so escape the lymph glands or they pass at once through the gland without stopping and without setting up any reaction. Besides the lymphatic glands, through which all lymph has to pass, the mucous membranes of the respiratory and alimentary canal have a further means of preventing the entrance of organisms and their products in the shape of follicles situated in it, and there is also a considerable development of the tissue in the mucous and sub-mucous coats not specially gathered up into follicles but diffused throughout it. This development of lymphadenoid tissue becomes more striking when we see how slight is the development of lymphadenoid tissue in connexion with the pelvis of the kidney, the ureters, and the bladder, and the absence of lymphadenoid tissue in connexion with the cerebro-spinal lymph spaces. The cerebro-spinal fluid is practically lymph in an extensive system of sinues, yet this lymph passes directly into the venous blood, and there are therefore cell products or metabolites due to brain activity which do not need to be rendered harmless before they are allowed to enter the circulation. A diffuse form of lymphadenoid tissue is met with in the mucosa and sub-mucosa of the conjunctivæ, nose, pharynx, larynx, bronchi, stomach, and intestines, in some parts less marked than in others—e. g., in the œsophogus; but in all parts capable of being abnormally developed in the course of disease. Of the special massses of lymphadenoid tissue the palatal tonsils develop around epithelial sacs which remain as the crypts. The pharyngeal tonsil forms around the epithelial crypt developed in connexion with the hypophysis, and the lingual tonsil is a lymphadenoid mass about the foramen cæcum. The solitary and agminated follicles develop in the mucosa between the glandular epithelium of the ileum, cæcum, and appendix. But the fuuction of this tissue is not limited to arresting or rendering harmless materials about to be absorbed, the follicles also produce cells which freely pass into the mouth, intestine, and bronchi, and prevent the excessive development of organisms in these canals. Foreign bodies can easily enter through an intact mucous membrane, whereas in the case of the skin there must be a lesion of the surface or the material must be well rubbed into the mouths of the hair follicles and sweat glands. Coal dust when inhaled passes through the intact epithelium of the bronchi and alveoli to the neighbouring glands. Carmine which has been mixed with the food of the animal passes out through the intact wall of the intestines, especially by way of the solitary and agminated follicles. Of all micro-organisms the tubercle bacillus has yielded most interesting experimental results. If a culture of tubercle bacilli be injected into the trachea of an animal the bacilli pass through the intact mucous membrane and infact the neighbour-

ing glands, Similar results may be obtained by feeding animals on material containing tubercle or anthrax bacilli, which pass through the uninjured intestine. In the human subject in connexion with tuberculous glands In the neck a visible lesion in the mouth or on the tonsil is quite the exception a carious tooth being the only frequent one. Indeed, the local inflammation causing hypertrophy of the tonsil or adenoid vegetations seems very rarely to be followed by tuberculous glands in the neck. It is quite the exception to see a combination of hypertrphied tonsils or adenoid vegetation and tuberculous glands in the same patient.

Intestinal Irrigation.

In the New York Medical Journal, Dr. R, C. Kemp discusses the varions uses of rectal irrigation and describes a double-current irrigator which he uses for thispurpose. The apparatus is essentially the same as that of the ordinary rectal douche, with the addition of a double-current tube, which varies from four to fourteen inches in length, the latter size being flexible. This method, as the writer allows, is not novel, and it derives its chief interest from the fact that in Dr. Kemp's hands it has been made to serve a great variety of purposes and has on the whole fulfilled his expectations of its value as a means of treatment. As in using the ordinary enema, the patient's position is carefully adapted to the end to be served and the part of the colon to be reached by irrigation. A variety of mild antiseptic solutions are employed, Among the diseases said to have been thus treated successfully are, besides ordinary fæcal obstruction colitis (simple and membranous), gastro-enteritis, dysentery, and typhoid fever. Shock, uræmia, and hæmorrhage appear to have been distinctly benefitted by this means, warm, or in the last case hot, saline solutions being used. Relief has in like manner been afforded in cases of pelvic peritonitis, cystitis, and inflammatory trouble in the prostrate and adjacent structures. By means of an apparatus which, like this, allows the return of the fluids injected irrigation can be so carried out that as much as several quarts may be passed into and more or less freely ejected from the colon. We observe that Dr. Kemp has used the irrigator very freely in such diseases as dysentery and typhoid fever, and apparently with advantage. We cannot but think, however, that in morbid conditions like these, associated with inflammation and usually also with ulceration, irrigation might easily be overdone and prove injurious, The purpose in view is antiseptic and so far logical, but it were surely best to limit the use of the douche to the early stages of these diseases and to, at most, a few occasions. Then, too, it should prove of especial value by removing septic and irritant matter and so reducing the dose of morbid poison in the bowel. Its administration under such conditions is certainly suggestive, and may very probably aid in abating the severeity of the enteric disorder.

Antitoxin and Tracheotomy in Laryngeal Diphtheria.

At the annual meeting of the Wisconsin State Medical Society held at Racine, Wis., May 6th, 1897 Dr. W. F. Whyte of Watertown read a paper entitled "Antitoxin and Tracheotomy in Laryngeal Diphtheria."

He gave a series of 18 cases which had come under his observation during the past year where antitoxin was used.

The ages of the children ranged from 23 months to 14 years. Mulford's standard antitoxin was the preparation used in all but two cases. Seventeen of the cases recovered and the 18th could not fairly be called a case treated by the serum, as she was not seen until the 9th day, and tracheotomy was performed as a dernier resort. She survived the operation 3 days.

In 5 others tracheotomy was performed; ages 23 months, 2 years and 9 months, two at 4 years and one 8 years of age. Recovery followed in every case, In the remaining 12 cases ameliation of the symptoms followed in from 12 to 24 hours after the first injection. The smallest dose given was 1000 units. In several cases where the symptoms were severe 2000 units was the initial dose. No bad results followed the injections nor any local irritation for more than a few hours in any case. In every case where the disease appeared in the tonsils it showed signs of sloughing in 24 hours after the injection. Those cases, where tracheotomy was performed, were not injected soon enough for the serum to have any effect and the operation tidied over the patient until the antitoxin could do its work.

These results are certainly flattering for the serum treatment. A number of deaths from Laryngeal Diphtheria took place in the city and vicinity where Dr. Whyte practices but none had been treated by antitoxin. In fact no recoveries took place where the Larynx was involved except those treated by the serum.

Dr. Whyte makes the following deductions from his experience as above narrated:

I. Antitoxin is a specific for Laryngeal

diphtheria where used early and in sufficient doses.

II. The larger the initial dose the more certain the result.

III. If the serum is injected 24 hours before dangerous dyspnœa develops, operative interference will not be necessary.

IV. If seen later intubation or tracheotomy tides the patient over until the serum can do its work.

Indications for Operative Interference in Croup.

Voriot, according to pediatrics uses steam inhalations as an adjuvant to serum-therapy in croup. He has found it possible to reduce the number of cases requiring intubation or tracheotomy to fourteen per cent. Sevestre has arrived at the same conclusion, advising late operation, thus giving the serum time to loosen the laryngo-tracheal membranes and quiet the spasm of the glottis. Whenever possible, it is far preferable to cure croup without other treatment than serum injections, for even intubation. while preferable to tracheotomy in children under two, has its very serious inconveniences which can only be obviated by constant watchfulness. Tracheotomy places the patient in danger of immediate accidents, and of early or late broncho-pneumonia.

However, the question of intervention in croup must be controlled by a precise knowl edge of the physiological mechanism of laryngeal obstruction and asphyxia. It is not the quaniity of membrane present which prevents the entrance of air into the respiratory passages—that is, the most membranous diphtheria cases are not always the most suffocating or spasmodic. It is undoubtedly the spasm of the glottis, associated with laryngeal diphtheria, which constitutes the great danger of asphyxia in croup, and here the intubation tube may act as a dilator as well as an air passage. Infants under two seem to be subject to more severe spasm of this kind than older children, while rachitic and nervous children are also affected by a more severe type. Croup, complicating a pre-existing broncho pneumonia, requires interference almost invariably.

However, it is rare to have a first attack of suffocation so severe as to make intubation indispensable, and it should only be resorted to when the attacks are very frequent and the patient remains livid and with dyspnœa in the intervals.

Every case of diphtheria with laryngeal symptoms should be carefully watched, and the instruments for intubation or tracheotomy should be kept ready for immediate use if required. Naturally, where close observation is not possible (in the country,) it is better to operate prematurely than to find the patient dead at the next visit.

Creosote in the Treatment of Children.

Hock has had brilliant results from the use of creosote in treatment of children, not only in phthisis, but in the sequelæ of whoop ing cough and the catarrh which so often follows measles. These two conditions, as is well-known, furnish a favorable opportunity for tuberculous infection. The usual treatment with expectorants is too often without result. Most diseases of childhood are accompanied by disturbances of digestion, and these are the symptoms which are first relieved by the use of creosote. The appetite improves, the abdominal pain disappears, and weight increases. Later the pulmonary condition improves. It goes without saying that the creosote must be given in such a manner as not to upset the stomach, and large doses in a concentrated form are theretore to be avoided, the drug being given in small doses with meals. Pills, though cheap, are objectionable, especially for very young children. Hock tried in a number of instances to administer fluid creosote with tincture of gentian, but in almost every case the stomach refused the medicine after a few days. He was most successful with a one to two per cent. solution of creosote in cod-liver oil, to which one-twentieth of one per cent. of sugar was added. The dose of this mixture is from one-half a dram to one-half an ounce, three times daily, according to the age of the pa, tient.

Castration of the Feeble Minded.

According to the Medical Record a bill has been introduced into the Michigan legislature by Dr. W, R. Edgar providing for the castration of all inmates of the Michigan Home for the Feeble Minded and Epileptic before their discharge; also for that of all persons convicted of a felony for the third time, and of those convicted of rape. The advocates of castration are too mild in their measures of prevention. The attempt to asexualize the vicious and the unfortunate may fail through faulty operation, especially in the case of women. A much safer remedy is decapitation. It is equally effective as a means of preventing the propagation of the unfit and it is far more certain. Besides, it is not only a prophylactic but a curative method, Half-way measures are foolish.

The American Public Health Association.

The twenty-fifth annual meeting of the American Public Health Association will be held at Philadelphia, Pa., October 26, 27, 28, 29, 1897. The executive committee has selected the following topics for consideration: 1. The Pollution of Water Supplies. 2. The Disposal of Garbage and Refuse. 3. Animal Diseases and Animal Food. 4. Car Sanitation. 5. Steamship and Steamboat Sanitation. 6. The Prevention of the Spread of Yellow Fever. 7. The Transportation and Disposal of the Dead. 8. The Relation of Forestry to Public Health. 9. Nomenclature of Diseases and Forms of Statistics. 10. Cause and Prevention of Infectious Diseases. 11. Public Health Legislation. 12. Cause and Prevention of Infant mortality. 13. Transportation of Diseased Tissues by Mail. 14. River Conservancy Boards of Supervision. 15. The Period during which each Contagions Disease is Transmissible, and the Length of Time for which each Patient is Dangerous to the Community. 16. Sanitation, with special reference to Drainage, Plumbing, and Ventilation of Public and Private Buildings. 17. Some Method of International Arrangement for Protection against the Transmission of Infectious Diseases. 18. Disinfectants. 19. Existing Sanitary Municipal Organizations of the Countries belonging to the Association, with a view to a Report upon those Most Successful in Practical Results. Upon all the above subjects, special committees have been appointed. Papers will be received upon other sanitary and hygienic subjects also.

Premature Labor with Hemorrhage.

I had a most excellent case on which to try Sanmetto. It was that of a woman about forty years of age, who had a premature labor, followed by a terrible hemorrhage. She bled about two hours before I was called, and when getting there I found a pale looking form of a woman, which had fainted away twice from loss of blood. I gave her two teaspoonfulls of Sanmetto, and the hemorrhage ceased in about five minutes. She rested quietly for about one half hour, when she took to coughing, then the hemorrhage commenced again. I gave her another large dose of Sanmetto and it stopped again. I stayed with patient about three hours, and no more hemorrhage occurred, and so I went home, leaving no medicine except the part of the bottel of Sanmetto, advising the attendants to give it as directed if hemorrhage should occur again, but it did not occur again, and the woman is improving nicely now, whereas at first I thought it a hopeless case. I do believe that it was the Sanmetto that saved her. I have also used Sanmetto a couple of times previous to this case, in combination with ergot, and the effect was all right then also.

Wm. B. Stoker, M. D.

Lancaster, Iowa.

Cocaine and Ichthyol in the Treatment of Fissure of the Anus.

M. Jules Chéron has always obtained good results by means of the following treatment: The anus being partly opened and the fissure discovered, a small tampon of absorbent cotton saturated with a 1-percent. solution of cocaine hydrochlorate is applied. At the end of five minutes local anæsthesia is obtained and the fissure can then be touched with pure ichthyol. This procedure is renewed on the following days. After the fourth or fifth application the tampon of cocaine is introduced as far as the internal sphincter,and at the end of five minutes it is possible to make a slight dilatation of the anus with Nélaton's dilator. In this way the fissure is distinctly exposed to view and can be thoroughly touched with ichthyol. The dilatation is more easily affected as cicatrization advances and it may gradually be increased until the disappearance of stricture of the sphincter, which so frequently complicates fissures of long standing, is an accomplished fact. Recent fissures may be cured by ten applications of this treatment, but old fissures, the borders of which are more or less callous, require a longer time for recovery; it is rarely necessary, however, to make more than five applications.

Tuberculosis,

Ausset, in the Lancet, reports the case of a little girl of 7 years from tuberculosis of the lungs and of the mesenteric glands, with a slight involvement of the peritoneum. With a view to experimentation he subjected the patient to the influence of the Röntgen rays upon the abdomen for an hour daily. After ten days the child had gained seventeen and one-half ounces in weight, her appetite was much improved, the abdomen was no longer sensitive, and she was much brighter and manifested more interest in what was occurring about her. After ten days more the diarrhœa was diminished, the other conditions remaining about the same. Treatment had to be suspended because the batteries were exhausted. The

patient immediately fell back to her previous condition, cachexia became marked, and death supervened. The author believes that in a more favorable case—one in which the tuberculous lesions were less advanced—the Röntgen rays might be efficacious in arresting the disease, not by direct action upon the Koch bacillus, but possibly by a stimulation of phagocytosis.

Acute Inflammation of Bone in Children and Young Persons.

Dr. Owen before a recent meeting of the London Medical Society said that the disease referred to was known as acute septic osteomyelitis, although it had been called by various other names. Every one admitted the importance and danger of the affection. It was referred to by the late Dr. Bristowe in a paper written in 1862, who pointed out its distinguishing features and stated that it was often mistaken for rheumatism. Chassaignac had also written about it in 1857, stating that its cause was obscure, but that it was possibly of a "scrofulous" nature. He had also said that it is essentially a disease of young people, and is "very rarely found over the age of seventeen." Dr. Owen next described the pathology of the disease. He showed how micro-organisms are especially prone to affect the junction of the diaphysis with the epiphysis in long bones, this being the point at which new and delicate tissue is formed and growth is most rapid. It is here that the disease in question almost always commences. The organisms may be introduced into the body by means of damaged food or impure air or water. They affect the tissue of the part described and there elaborate a poisonous ptomaine. Abscess rapidly follows, and the staphylococcus pyogenes aureus is always found. The disease is a common one; out of 165 cases collected by Dr. Owen 96 were in males and 69 in females, the figures working out at about five boys to three girls. In these 165 cases the femur was affected in 33, the tibia in 47, and the humerus in 20. Next in order came the fibula, and in still smaller proportions came the radius, ulna, clavicle, and os calcis. The chief predisposing causes depression of the system, fatigue, and, above all, injury of the part. The local symptoms are those of deep-seated acute inflammation, pain, great tenderness on pressure, early redness and heat of the surface, especially where the bone is thinly covered with muscle. The constitutional symptoms are those of fever due to absorption of ptomaines; there are headache, delirium, and high temperature, rigors in adolescents, and convulsions in children. Many of the subjects of the disease die quickly from pyæmia. The question of diagnosis is important, as the disease may be, and has been very often mistaken for rheumatism and erysipelas. The characteristic points are (1) the part of the bone affected, and (2) the marked tenderness on pressure, even when there is no redress. In rheumatism the joint itself is affected, and not the parts above or below. In erysipelas all the local symptoms are superficial. In periostitis the same applies, and the shaft of the bone will probably be primarily affected rather than the end. The treatment is by early incision, and, whether pus be found or not, the bone should be drilled or gouged. In some cases (especially in infants) the adjacent joint is attacked, and it must then be laid open and irrigated. Occasionally amputation is necessary or the patient may die from acute septic poisoning.

Wound of Heart and Pericardium: Suture of Pericardium: Recovery.

According to the Medical Record Dr. M. Williams believes the following to be the first case—successful or otherwise—recorded of suture of the pericardium: J. C., aged 24 years, was admitted into Provident Hospital, Chicago, July 9th, 1893, with a stab wound about one inch long, three-fourths of an inch to the left of the sternum, through and in the long axis of the fifth cartilage. At first the wound was regarded as a superficial one; but during the night there were such persistent hæmorrhage, pain over the cardiac area, cough, and pronounced symptoms of shock that a re-examination was made on the following morning, which showed that the knife had penetrated the fifth cartilage far enough to wound the internal mammary vessels. The following operation was then performed: The original wound was lengthened to the right as far as the middle of the sternum. A second incision was made from the centre of the first, and carried over the middle of the cartilage and fifth rib, about 6 inches in length. The sternum, cartilage, and about 1 inch of the fifth rib were exposed. The cartilage of the fifth rib was separated at its junction with the sternum and at a point 2½ inches from the sternum and ¾ inch from its attachment to the rib. The inferior attachments of the incised portion were separated, leaving the superior ones in place. The incised piece was reflected upwards, making an opening about 2 inches long and 1½ inch in width, bringing the internal mammary vessels into view. These vessels were ligatured above and below. To secure addi-

tional room an incision was made in the fifth intercostal space. The heart and lung being depressed backwards, a small punctured wound of the heart was seen. This wound was about one-tenth of an inch in length, and was about half an inch to the right of the coronary artery, between two of its lateral branches. The wound in the pericardium was about 1½ inch in length. There was no hæmorrhage from the heart or pericardium. The wound in the pericadium was closed by a catgut suture; the parietal flap was replaced, and the wound dressed. The patient, notwithstanding a sharp attack of pericarditis and pleurisy, made a complete recovery. Three years afterwards he is reported as being well.

Cystitis Due to the Colon Bacillus in Children.

All the cases of this kind which Hutinel has seen have been in little girls who had a neglected vulvo-vaginitis, then an accidentally produced intestinal infection, and finally the cystitis developed. Consequently the clinical picture comprises the symptoms of all three. The cystitis usually begins with irregular fever and the local signs soon become marked, comprising frequent, painful micturition, of followed by a few drops of blood; the urine contains albumen, an abundant deposit of muco-pus, and microscopically epithelial cells, pus cells, and bacteria in large numbers. The last can easily be cultivated, and proven to be the bacillus coli communis.

While the prognosis is usually not grave, relapses are quite frequent, and the bacilli often remain in the bladder a long time. A pyelo-nephritis has been reported by Guyon as a complication.

It is probable that the bacteria enter through the urethra; and, in some cases, that they travel directly through the rectal wall into the bladder.

Rheumatism.

Rheumatic affections of the nose have received but little attention. Freudenthal, however, states that "a number of cases have come under his observation in which the symptoms of nasal rheumatism were distinct and unmistakable. Two varieties of the disease were noted—one with visible changes in the nose, and the other without such changes. The changes consisted of a swelling of the lower and middle turbinated bodies which obstructed the breathing, and which could not be reduced with even strong solutions of cocaine. In all the cases the pain in the nose was very severe, and all were associated with attacks of articular rheumatism affecting various joints in the body. In all of the cases, too, anti-rheumatic treatment was the only one which had any effect on the nasal symptoms."

The epistaxis which we occasionally see during the course of acute rheumatism is almost invariably due to the salicylate of sodium now so generally employed; at all events, I can find no reference to epistaxis among the symptoms of acute rheumatism in the pre-salicylate days.

In the naso-pharynx the only condition which seems at all dependent on rheumatism is lacunar inflammation of the third or pharyngeal tonsil.

Pharyngitis is a very common complication of acute rheumatism. It usually appears a day or two before the onset of the articular pain, but occasionally the throat is only complained of after the disease has fully declared itself.

The Pathology of Missed Abortion.

Dr. G. W. E. Fothergill, in the British Medical Journal, states that, when the fœtal circulation ceases, the vessels of the placenta are rapidly obliterated. The fœtal epithelium covering the chorion and its villi degenerate, and the maternal blood between the villi forms clots, which are altered into dense laminated fibrin. The decidual cells then multiply and invade the fibrin, which they gradually replace, filling the intervillous space with layers and bands of decidual tissue. At the same time they disintegrate the fœtal epithelium, which come to be represented by scattered heaps and rows of nuclei, and finally disappear. The amnion remains almost unaltered, but adheres closely to the chorion, and the united membranes are thrown into folds and convolutions, covering the rounded lobes of altered placental tissue. The fœtal portion of the placenta does not grow after the death of the fœtus, though the maternal portion containing the decidual cells remain active. It is therefore improbable that malignant new growths can arise from fœtal placental elements.

Sanmetto in Bright's Disease.

Charles F. Reiff, M. D., of Freemont, O., writing, says: "I prescribed sanmetto in a case of advanced Bright's Disease. The patient became more comfortable, and since then has used several bottles of sanmetto. In my opinion sanmetto is the most efficient remedy for diseases of the genito-urinary organs, and I shall continue to prescribe the remedy."

The Prevention of Tuberculosis in New York.

The Health Department of New York (Lancet) has taken the step of declaring pulmonary tuberculosis to be an "infectious and communicable disease dangerous to the public health," It has also ordained that notificatlon of each case of the disease coming under the notice of medical practitioners in the city shall be made within a week of its first coming to the knowledge of the practitioners, and that public and private institutions and dispensaries shall also notify all cases heard of; but how far the duty is to be one for which remuneration is to be given is not stated. The provision of hospital accommondation for the poor suffering from the disease is enjoined by the medical members of the department, these poor sufferers being regarded as active sources of danger to the community. All institutions taking in cases of the malady are to be systematically and officially inspected, and the people generally are to be educated to regard the malady in the grave light in which it is medically held, and to take in consequence adequate means for its repression. A close supervision over individuals suffering from the disease in crowded localities and workshops is to be maintained. The medical members of the department regard it as quite feasible, even in face of the present estimate of 20,000 tuberculous citizens in New York, to restrict tuberculosis within the narrowest bounds, and eventually perhaps almost to exterminate it. Future comparative records from New York will prove to be of interest in this connexion. To our way of thinking the whole scheme is Utopian.

Bright's Disease.

Epistaxis is a frequent symptom of chronic interstitial nephritis and is occasionally met with in the other forms of Bright's disease. It may be quite an early sign of granular kidney: the urine should therefore be examined in cases of abundant or frequent epistaxis. The bleeding is dependent upon the altered blood state, changes in the vessels of the Schneiderian mucous membrane, and upon the cardiac hypertrophy and increased arterial tension. The exact connection between Bright's disease and œdema of the larynx is still a matter of discussion. The probable explanation is that Bright's disease determines the onset of the œdema in cases in which, under ordinary circumstances, the local irritation would have been too slight to have caused it.

The Antiseptic Value of Iodoform.

The New York Medical Record says that Dr. Lomry has investigated this question and attempts to explain the different results obtained by bacteriological experiment and surgical experience. He confined his investigations to the pyogenic streptococci and staphylococci, because it is here that the difference exists. He found that iodoform aided the healing process in dogs as in human beings. In vibro the growth of cultures was markedly diminished by the addition of iodoform to the nutrient medium. The negative results of previous experiments are due to their having employed culture media in which iodoform is insoluble. In various kinds of serum in which iodoform is slightly soluble, the effect is very appreciable and explains the action in supporting wounds. It was also shown that the virulence of the micro-organisms is diminished and their toxins are partly neutralized by iodoform,and instead of injuring leucocytes iodoform actually stimulates phagocytosis. But since it is not bactericidal, ordinary aseptic precautions should not be neglected, and clean iodoform should be used. Iodoform dressings should be renewed daily, so that leucocytes which have done their work may not remain as food for surviving microbes.

Hæmorrhage from Healthy Kidneys and its Treatment.

Dr. G. Klemperer, in an interesting paper published, in "Treatment," has collected a number of cases in which after prolonged hæmaturia, and symptoms pointing to disease of one or other kidney, the organ has been found healthy on exposure by operation, or after actual extirpation, and the symptoms have thereupon ceased.

He attributes the hæmorrhage to a local angio-neurotic affection of the kidneys, of functional or hysterical nature, and compares it with hæmorrhages from healthy lungs and stomach in hysterical subjects. Renal vasomotor paralysis he thinks produces hyperæmia, soon followed by permeability of the vessel walls, which allow the passage of red blood corpusles. Similar hæmorrhage is sometimes the result of severe physical exertion.

The diagnosis rests between nephritis, calculus, tuberculosis, pyelonephritis, and "bleeder's" hæmaturia. In angio-neurotic hæmaturia there is simply blood mixed with the urine, without any other pathological condition or renal enlargement. Its renal origin is shown by the presence of blood casts or by cystoscopy. General neurasthe-

nic signs support, but do not *per se* prove the diagnosis.

The pain when present closely simulates that of renal colic, but the latter is of greater intensity and shorter duration.

The diagnosis of "bleeder's" hæmaturia rests on his personal and family history.

The diagnosis of angio-neurotic renal hæmorrhage can only be made after many weeks' observation.

The treatment consists in absolute rest in bed, moderate but not exclusively milk diet, and influence by suggestion, cold douches after warm baths, and perhaps local electricity.

If no improvement occurs after many weeks of such treatment, and anæmia threatens life, the question of exploration of the kidney arises. Should it be found healthy it should not be extirpated, but the wound closed and the effect watched.

Fracture and Dislocation of the Vertebral Column.

At the ninety-ninth annual meeting of the Medical and Chirurgical Faculty of Maryland, held in Baltimore April 27th to 30th, 1897, Dr. R. Percy Smith, of Sunny Brook, Md., read an interesting paper entitled "Fracture and Dislocation of the Vertebral Column, with other Severe Injuries. Recovery," and exhibited a patient he had treated for such.

The patient was a man aged sixty-nine years, who had been struck by a weight of about five hundred and fifty pounds falling from a distance of ten feet, striking him in the forehead, causing a fracture of the outer and middle tables of the frontal bone—a flesh wound extending out to the left Supra-orbital prominence and laying bare the skull down to the periosteum. The soft parts had fallen down on the cheek, completely covering the orbital cavity. He had also received a fracture of the nasal bone, the cartilaginous end of the twelfth rib was torn loose on the left side, the fourth and fifth dorsal vertebra was displaced inward about a quarter of an inch, and the sixth dorsal vertebra was fractured! The fractured vertebra was so movable as to seem under the examining finger as though floating. The excessive shock produced by the accident was treated by hyperdermics of strychnia 130 grain and repeated as necessary, assisted by bottles of hot water to feet and sides. The flesh wound was repaired by stitching and treating antiseptically! The injured rib kept at rest with adhesive straps. The injured vertebra by keeping the patient on his back constantly, and hot, moist fomentations applied to relieve pain, which was found to act admirably! The recovery took place in about a month. An interesting feature of the case was the fact that for eighteen months previous to the accident the man had been troubled with a muscular tremor of the legs, to such an extent as to prevent him walking or standing alone without danger of falling. Since his recovery from the spinal injury that has all disappeared, and his gait is perfect without needing any assistance. Dr. Smith believes this due to the fact that the spinal cord had begun to degenerate and the injury to the vertebra produced stimulation to the cord sufficient to clear up the tremor. Why the cord was not injured and paralysis produced no one could quite explain; but during the entire treatment no fever or any signs of inflamation or paralysis showed itself.

Taken in all, the case was an interesting one, and received marked attention by the members of the Society.

Ingrowing Toe-nail.

Dr, M· A. Veeder has made use of a method for ten years which answers well in the ordinary run of cases, and also in certain cases of onychia. It consists simply in cutting a piece of ordinary felt plaster, sold for use in cases of corns or bunions, so as to be the exect size and shape of the nail about which the ulceration is located. The bit of plaster, thus shaped and fitted to the nail, is to be firmly attached thereto, so as to press aside the overlapping granulations from the nail. By holding it in this posieion a minute or two, until it dies and adheres firmly to the nail, it becomes strongly fastened, and will stand considerable rough usage, but as an additional security, a strip of isinglass plaster is wrapped three or four times around the toe, including the felt. If properly applied the relief is immediate, and the cure is complete as soon as the thinned and jagged edge of the nail underlying the granulation has grown to its normal size.

Obstetrical Paralysis.

Y. Guillemot, in the British Medical Journal, gives descriptions of twelve cases of paralysis of the upper extremity occurring in breech presentations, all delivered by the same midwife, evidently with violent and unreasonable traction upon the arms. In nearly all cases the scapula of the affected side was raised, presumably from injury to the branch of the cervical plexus supplying the lower part of the trapezius, by the lowering of the shoulders and consequent elongation of the neck. That such

traction should affect especially the fifth and sixth cervical nerves is explained by the fact that the tissues are least resisting at the level of the third, fourth, and fifth cervical vertebræ, as shown by the occurrence of decapitation at this point when traction is sufficiently strong. He explains the comparative freedom from injury of the sensory nerves by the position of extension in which the head is delivered in breech cases, the posterior nerve roots thus escaping.

The Action of Ergot on Pregnant Women.

Dr. Atthill in the British Medical Journal refers to a number of cases in which he prescribed ergot combined with strychnine for patients in whom he feared post-partum hæmorrhage. It was given some days before labor set in.

It has been, he says, his invariable rule to employ this treatment in all cases in which there was reason to fear the occurrence of hæmorrhage, and the results have been most satisfactory. He states that he has never had occasion to regret its employment, and has never observed any injurious effects on either mother or child, although the ergot was taken regularly for five or six weeks before labor set in. These cases, he thinks, are sufficient to prove to his satisfaction, at least, that ergot, alone or in combination with strychnine, may be taken with absolute safety to both mother and child by pregnant women, in the usual dose, and for a considerable time. When it is taken continuously for not less than three weeks prior to labor, it tends to delay the setting in of uterine action, and does not bring on labor in a case in which uterine action has not already been excited. Its administration for some weeks prior to the beginning of labor arrests the tendency to post-partum hæmorrhage, and facilitates the involution of the uterus.

Dr. Atthill mentions also some cases of threatened abortion in which he used ergot, and states that he now invariably administers it to women threatened with abortion. In summing up the whole subject as to the action of ergot combined with strychnine, he gives the following conclusions as the result of his experience:

1. When administered previous to the termination of pregnancy in the case of women in whom a tendency to post-partum hæmorrhage is known to exist, it tends in a marked manner to prevent the occurrence of hæmorrhage.

2. When so administered in ordinary doses, it does not produce any injurious effects on either mother or child, and it seems to delay the beginning of labor in such cases.

3. It tends to make the involution of the uterus more perfect, and lessens the chance of the occurrence of subsequent uterine troubles, many of which depend for their cause on imperfect involution of that organ.

4. It will not bring on premature labor or induce abortion unless uterine action has previously been set going.

5. In cases of threatened abortion its administration frequently seems to act as a uterine tonic, and in some cases tends to avert the danger of a miscarriage, provided the ovum is not blighted.

6. If the ovum is blighted, and especially if it is detached, ergot usually hastens its expulsion.

Periodical Paroxysms of Hiccough.

S. Feilberg, in the Edenburgh Medical Journal, describes the case of a man, 42 years old, who suffered for several months from periodical paroxysms of hiccough, which entirely prevented his working and caused considerable suffering. After having searched in vain for the cause of the hiccough, the author finally found, at the base of the tongue, a tumor having three lobes, of which the central one, the largest, was about the size of a hazel-nut. These growths were due to a pronounced hypertrophy of the adenoid tissue at the base of the tongue, which caused, in addition to the hiccough, a continual sensation of fullness in the throat. There was also enlargement of the palatal tonsils, which were excised without producing any noticeable improvement. Ablation of the central lobe of the lingual tonsil caused considerable amelioration of the hiccough, which ceased entirely after the extirpation of the lateral lobes.

Sanmetto in Diabetes Mellitus.

R. A. Miller, M. D., of Atchison, Kan., writing, says: "I used Sanmetto in a severe case of diabetes mellitus in a gentleman fifty-four years of age, in which there was an excessive flow of urine, patient having to arise some four or five times during the night, severe irritation at neck of bladder, and enlargement of the prostrate gland, dry hot skin, with considerable emaciation. After using Sanmetto for three or four days the trouble was greatly improved; patient not having to arise more than once during the night, and has since, by the use of one more bottle of sanmetto, almost recovered. I think sanmetto a most excellent remedy."

Treatment of Enuresis.

Koester has revived the electrical treatment of enuresis, first recommended by Seeligmuller in 1867. and obtained very satisfactory results. After the patient has emptied his bladder, he lies down on a sofa at full length. The anode of a faradic battery, armed with a medium-sized round electrode, is placed on the abdomen, just over the region of the bladder. while the cathode wire, after having been thoroughly disinfected with a five per cent. solution of carbolic acid, is inserted into the urethra for 1 to 1.5 cm., and thus held, Allow the current to pass, and gradually increase its strength as high as the patient can bear with comfort. Continue for two or three minutes, then gradually weaken the current to its lowest power, where it is allowed to remain for one minute. After this procedure has been repeated three times the seance is ended, Frequently this one treatment is sufficient for a cure. It is better, however, to repeat it a few times during the following three or four days. Whenever the patient has soiled either the bed or his clothing with urine. an application of the current should be made the following day, and only when no enuresis has occurred for a number of days in succession should the treatment be discontinued, He has treated twenty cases (eleven boys and nine girls). Of these there were eleven cases of enuresis nocturna et diurna, of which nine were cured and one was improved; and nine cases of enuresis nocturna, of which eight were cured. The average number of treatments was two.

He believes the cause of enuresis to be a weakness of the closing muscles of the bladder, the sphincter vesica and compressor urethra. The irritation produced by the cathode influences these muscles reflexly, hence the success of the method. Even in cases accompanied by obstruction to nasal respiration, or adhesions between the glans and foreskin, and in orthophimosis, the result was satisfactory, which goes to prove that an accompanying weakening of the sphincters must at least have existed. The strengthened sphincters were able to resist the reflexly irritated detrusors. Another case, in which the reflex irritation producing evacuation of the urine had been removed by the curing of a phimosis of two years' standing, still suffered from enuresis, until cured by the electrical treatment. This case also corroborated the fact insisted on by Henoch, that enuresis may follow the infectious diseases, for the boy remained cured until he had an attack of measles, when a relapse occured. From taking cold, and through psychic excitement, the sphincters of the bladder may experience a temporary weakness. General debility is not a very important factor as a predisposing cause, it being only present in seven out of the twenty cases, the rest having a strong and even robust constitution. In one case heredity seemed to have had some influence, as the father suffered from enuresis up to puberty, and a brother is still subject to it.

The Diagnosis of Tuberculosis from the Morphology of the Blood.

Dr. A. M. Holmes writing in the Medical and Surgical Reporter concludes as follows:

The diagnosis of tuberculosis, from the morphological appearance of the blood, rests upon the hypothesis that each individual has a biologic prototype in the leucocytes of his own blood, That leucocytes are independent organisms with functions analogous to those of the larger organism. That they pass through the stages of growth and decay. That disintegration of leucocytes may occur at any age. That the leucocytes, are tissue-formers. That tuberculosis is a disease characterized by tissue-disintegration. That in tuberculous blood there is abundant cell-disintegration, premature development, premature decay, and more or less deviation from the normal percentages of the various types of cells. That if there is marked disintegration in the leucocytes, it is with absolute certainty that we can predict a similar condition in the larger organism. That tuberculosis possesses a combination of blood appearances, from which a diagnosis may be made earlier than by any other means that we now possess. That these may be recognized under a high power. That they can be recognized even before the disease manifests itself in the individual. That they are sufficiently marked in tuberculous persons, or even in those with a strong tuberculous predisposition, to enable a diagnosis being made from the blood alone, without knowledge of the history or physical condition. That the real source of recuperative power is to be found in the leucocytes. That thus far no other pathologic condition has been found which presents similiar appearances. That to secure an early diagnosis would enable many to avail themselves of favorable climatic changes, and thereby delay or even prevent the destructive results which would otherwise inevitably follow. And, finally, that if future investigations confirm these deductions, we may look forward to a no distant day when, if we expect to detect tuberculosis in its incipiency, we must study the leucocytes.

Retention of Dead Fœtus in Uterus.

Biot in the British Medical Journal claims to have observed two evident cases of this phenomenon, and to have attended a third patient where retention occurred during a pregnancy when she was under the care of another. The first patient was 27. During the third month she fell downstairs. The uterus remained stationary till five months and a week after the accident, when labour set in, and a macerated fœtus of the fourth month was delivered. Intrauterine injections of carbolic acid were employed, and the puerperium was natural. The patient has since borne a healthy child. The second patient was 28 years old. At the second month threatened abortion was observed, and the uterus henceforward ceased to enlarge. Six months later labour pains set in; the uterus was of the size of a big fist. Spontaneous delivery occurred. A complete unruptured ovum was discharged, followed by a large placenta, though the fœtus was very small, only just over an inch long, and mummified. A feverish attack occurred during childbed. From its clinical chatacters, Biot considered that it represented not sepsis but paludal fever, from which the patient had suffered eighteen years before. There seems, however, to have been left parametritis. The patient got up on the eighteenth day apparently quite well. The third patient was 42. She struck against a bench when 6½ months' pregnant. At term she was delivered of a macerated fœtus. Between that time and the previous injury she had enjoyed good health and attended to her business. Four months after delivery a cervical glan l suppurated. Other glands in the same region became inflamed from time to time, and this condition has lasted for several years. Biot artributes the adenitis not to the abnormal pregnancy, but to the unhealthiness of the patient's home. The writer concludes with a useful historical summary of previous cases of retained fœtus.

The Etiology of Rickets.

From observation and experiments of Sutton, Korsakow, the clinical studies of Wegner, Eriese, Jacobi, Montmolli, Hartwitz, Hochsinger, Freer, Snow and Forchheimer, the causes of rickets appear to group themselves in harmony with the following classification:

1. Suckled immediately and continuously under normal shelter, clothing, atmosphere, and light; under abnormal or deficient shelter and clothing, contaminated atmosphere, and modified light; either a predominance of one or more of these conditions.

2. Suckled immediately, but discontinued within one or several months under normal shelter, clothing, atmosphere, and light; under abnormal or deficient shelter and clothing, contaminated atmosphere, and modified light; either a predominance of one or more of these conditions.

3. Hand-fed immediately and continuously under normal or deficient shelter, clothing, atmosphere, and light; under abnormal shelter, clothing, contaminated atmosphere, modified light; either a predominance of one or more of these conditions.

4. Diseases occurring in the mother during or previous to gestation, modifying special structure of fœtus or gaseous liquid and solid food to the fœtus.

Analyzing this classification in its order, the following considerations are apparent: Some women suckle their children tmmediately and continuously after birth, who absorb normal or abnormdl food stuffs under normal environment, whose normal secretious and excrerions are inhibited either by excessive physical function, domestic difficulties, antagonism to suckling or to the discipline to suckle the child. Again, soma persist in doing it where the nourishment is abnormal in quality, owing to anatomical insufficiency of vascular and mammary development or other acute or chronic pathological conditions inhibiting the secretion of milk.

Those suckled under abnormal environment are also prone to the disease where adequate evidence of faulty absorption of milk cannot be found, consequently there must be a predominance of one or more of the abnormal environments. In the second and third classification all statistics give ample evidence that the causes exist in the inadequate absorption of the semi-liquids in the former case, and in the combination of both semi-liquids and external environment in the latter case.

In the fourth classification, the evidence of statistics indicates that syphilis especially predisposes to the uterine and congenital form through the modification of certain structures, or the production of abnormal gaseous, liquid, and solid food stuffs to the fœtus.

As a result of an examination of several liquid extracts of malt on the market, Edgar L. Patch, of Boston, says that not one of these had a particle of diastasic power. They contained from 3 to 10 per cent. of alcohol, but it is not reasonable to believe that they are of any more value than pure beer, or some preparation of extract of malt and alcohol.

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IMPERIAL GRANUM SEEMS TO HOLD FIRST PLACE IN THE ESTIMATION OF MEDICAL OBSERVERS.—*"The Feeding of Infants," in the New York Medical Record.*

IT CONTAINS NO TRACE OF ANY IMPURITY.—*The Lancet, London, England.*

A valuable aid to the physician in the treatment of all the graver forms of gastric and enteric diseases.—*The Prescription.*

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IMPERIAL GRANUM is acceptable to the palate and also to the most delicate stomach at all periods of life.—*Annual of the Universal Medical Sciences, Philadelphia, Penna.*

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It is one of those rare preparations that never disappoint—but is all that is claimed for it.—*Maryland Medical Journal, Baltimore, Md.*

IMPERIAL GRANUM has stood the test of many years, while many competing foods have come and gone, and have been missed by few or none. But it will have satisfactory results in nutrition far into the future, because it is based on merit and proven success in the past.—*The Pharmaceutical Record, N. Y.*

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The Treatment of Eczema in Children.

According to Bulkley, eczema is predisposed to either by a faulty nutrition of the tissues, inherited or acquired, or a faulty action of the deeper layers of the skin arising from dietetic, assimilative, and neurotic causes, or climatic and hygienic external agencies. Dentition will not induce an eczema primarily, but reflexly it occasions recrudescences. The exciting causes he does not discuss, except to insist that local irritants, though capable of exciting an inflammation, cannot produce a true eczema except in subjects properly predisposed. He relies mainly on constitutional treatment, including diet and hygiene, to bring about a cure and prevent recurrences. The quantity and quality of the food and drink, its mode of preparation, and the time and method of its consumption, must be regulated. Mild laxatives and remedies that promote elimination of solids and liqids by the urine are of advantage, but tonic treatment should pervade all treatment. Arsenic pushed to full doses acts well in a few cases. Locally protection and soothing applications are called for, yet yet the tendant is often led away after a will-o'-the-wisp in ordering stronger and stronger remedies to allay irritation. Well prepared oxide of zinc ointment is bland and protective, so is subnitrate of bismuth ointment, but rather more astringent.

The Serum Diagnosis of Typhoid Fever.

Peterman in the London Lancet records his experience of Widal's method of diagnosing enteric fever. For several months he has employed Widal's test in a series of cases at the military hospital of the city of Msacow, and has never failed to obtain positive results. In two instanees he has taken the blood serum from convalescents, who, as far back as eleven and sixteen years ago respectively, passed through an attack of typhoid, and mixed it with a fresh emulsion of living Eberth's bacilli. Within a few hours the latter became less motile and changed their shape. The process of agglutination has been observed to be fully developed within twenty-four hours, the specimen being kept for that time at the usual bodily temperature. This observation is of far-reaching importance, since it tends to show that for a very long period after convalescenee the patient's serum is able to exert the described influence on the typhoid organisms. In concluslon, the author says that Widal's method is very useful for diagnostic purposes, and he expresses the belief that it will soon come into general use.

Intrauterine Injections of Steam in Puerperal Endometritis.

Kahn claims excellent results in 7 out of 8 cases of septic endometritis after labour or abortion. His practice is to inject superheated steam into the uterine caqity. A metal can, with a spirit lamp and thermometer (which must mark to 200 deg. C.) serves as a boiler, the tubing fitting on to a catheter. The application lasts about half a minute, and never over a full minute. By a tap, the current of steam can be interrupted while the cathater is being adjusted before use, lest scalding or burning should occur. The temperature of the steam must be a little above boiling point—about 110 deg. C. Kahn finds that the jet of steam is followed by no bad effects, and gives little or no pain. It actually puts a stop to the tenderness of the uterus usual in puerperal endometritis from retained placenta, etc. Uterine contractions are actively stimulated, and ill-smelling discharges cease. Kahn has no doubt that the steam kills the bacteria in the endometrium, and as it coagulates alumen, all blood vessels and lymphatics are sealed up, and fresh granulations can develop under a protective covering.

Ozone Inhalation in Whoopingcough.

Doumer in the British Medical Journal reports his experience of this method, which Labbe and Oudin found very successful in 14 cases. He treated 5 cases—brothers and sisters and mother, all suffering from whooping-cough of a fortnight to a month's duration, with paroxysms of medium severity, varying in number from twenty to sixty a day. The ages of the patients ranged from 3 to 35 years. The treatment consisted in the inhalation of ozone for ten to fifteen minutes twice a day. The results were as follows: In 4 cases in which sleep at night was much broken there was improvement after four inhalations. In 1 case in which vomiting was severe it was speedily checked. In all the cases there was diminution both in the frequency and in the severeity of the paroxysms from the second day, discontinuance of the inhalations, however, being always followed by relapse. A cure was effected after twelve to twenty-seven inhalations—that is, in nine to fifteen days. There was no relapse in any of the cases two months and a half later.

To remove blood stains, soak the towels in warm water, to which is added a teaspoonful of tartaric acid.

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is a hypnotic of tried and approved value. It possesses undoubted advantages over other hypnotics in Prompt Effect, Reliable Action, Freedom from Evil After-effects and General Superior Therapeutic Value, as confirmed by contributions to current literature by H. C. Wood, W. Hale White, John V. Shoemaker, Chas. L. Dana, Chas. H. Steele, John Aulde, S. V. Clevenger, and many other authorities.

Much depends on the proper administration of Chloralamid to obtain the full effect.

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The Faradic Treatment of Uterine Fibromata.

Veyrier recommends faradism in the treatment of fibroids in preference to Apostoli's galvanic method. Faradisation of the uterus was originally insroduced by Triepier, and is particularly indicated in the following conditions: (1) Inaccessibility of the cervix; (2) when pain is the predominant symptom; (3) when it is desired to induce the "delivery" of a pedunculated submucous fibroid. Its advantage in the first case is that it is effectual without the electrode requiring to enter the cavity of the uterus. The anodyne action of faradism is well known, and it has often been found to hasten the expulsion of the uterine contents when ergot has failed. The intensity of current to be used depends upon the sensibility of the patient; it is pushed to a point beyond which further increase would cause too much pain. The author uses an indifferent electrode of nickelled copper, covered with a thick layer of gauze, which rests upon the abdomen; the active electrode is passed through a glass Fergusson's speculum, and rests upon a wad of moist wool at its upper end, reaching to the cervix. The bipolar instrument, used by Apostoli for galvanism, is also of great service. The active pole may be introduced into the uterus if possible, The strength of current should never be sufficient to produce any chemical effect. The sittings are not to be prolonged beyond a quarter of an hour, and the patient is recommended to remain recumbent for the rest of the day, lest the sedative effect of the treatment lead to imprudent exertion. The author quotes 19 cases, 3 of which are original illustrating the value of the method.

Glycero-phosphate of Lime and Kola Wine.

Labesse recommends glycero-phosphate of lime as the best medicine in every form of organic decay, especially in that of nervous origin. It can be safely prepared in standard solutions without any such excess of alcohol as would cause precipitation, and may be conveniently prescribed with citric acid. In combination with an alcoholic extract of kola, which by the addition of a *vin de liqueur* becomes what is known as kola wine, it improves the nutrition and regulates all the organic functions. The kola nut, according to the researches of Heckel and Schladgenhauffen, sinch confirmed by Dubois, Marie, and Knebel, is richer than any other vegetable product in caffeine, of which it contains 2,346 per cent., but the nuts should be fresh and carefully selected. In addition to caffeine they contain theobromine and a kola red analogous to cinchona red. Apart from any nourishing qualities they save waste, modifying disassimilation without interfering with oxidation.

Hemiplegia from acute Lead Poisoning.

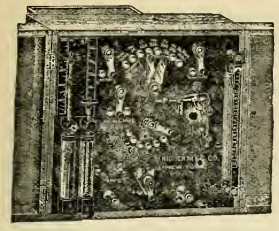
Da Costa in the American Journal of the Medical Science gives a most instructive account of a case of rapidly-occurring hemiplegia from acute lead poisoning. The patient was a lady thirty-five years old, in very good health. Some rooms in her home were painted, and the house became filled with the smell. She quickly began to suffer from headache, and in the course of three days a right hemiplegia developed—tongue, arm, and leg. This had been preceded by numbness. Shortly afterwards there was a sense of numbness and coldness in the right leg, but no motor weakness developed. Four weeks subsequently the tendon jerks of the right arm and leg were exaggerated, and there was paresis of the arm and led, especially of the latter. There was no anæsthesia, nor were there any tender spots in the course of the nerves. There was a bluish line around the gums. Under iodides and sulphate of magnesium gradual recovery took place. The shortness of exposure before symptoms developed and the form of paralysis—hemiplegia—are exceptional, as is also the affection of the central nervous system without preceding colic. The diagnosis of these cases has to be made, both from those cases of peripheral neuritis due to lead, and from those cases of chronic lead poisoning in which as a consequence of renal cirrhosis cerebral hæmorrhage results. The condition is easily differentiated from peripheral neuritis by its hemiplegic distribution, by the presence of degeneration of the muscles, and by the exaggerated tendon jerks; and from the latter condition by the absence of the signs of chronic renal disease, and by the subacute—not sudden—onset.

Disturbance of Lactation.

Angel Money maintains that the custom of weaning newly-born children is too prevalent, and too few attempts are made to correct the milk when at fault. A thorough investigation of mother and milk should be made, and the quantity and quality of the latter determined and the percentage of fat and proteid, which are the only variable factors, ascertained. Bad milk contains toxic matters, albumoses, and leucomaines, albumen being plentiful but of the wrong kind, while the percentage of fat is defective; colostrum corpuscles are present and may be numerous. The most successful milk is that of mothers desirous and confident of ability to nurse. Exercise can diminish percentage of proteids, and a moderate amount of beef or mutton can increase percentage of fats; these facts are seldom acted upon. A poor milk may be enriched by improving the maternal dietary, giving more meat and more milk dimishing exercise, shortening intervals of nursing, and dimishing amount of liquids imbibed. Rich milk may be diluted by lengthening the intervals of nursing, decreasing the amount of meat eaten, increasing exercise, augmenting fluid drunk; drinking rain or distilled water, Helidon, or Vicky water midway between the nurslings is an excellent practice. Colostrum corpuscles present after the first fortnight signify defective formation of milk. It is unjustifiable to diminish the water in poor milk by purgation, which may stop milk flow or may even cause the milk to contain toxic substances. The breast pump is not sufficiently used to improve the function of lactation; it should replace the baby while attempts being made to improve the milk. The more perfectly-formed the milk is the more caseinogen and less albumen it contains; however great the percentage of caseinogen, it never in the stomach forms dense clots as formed by cow's milk. It is a mistake to suppose that stout or porter improves milk. Another error is the belief that beef-tea and chicken broth are good for nursing mothers. Excitement, fatigue, and overfeeding should be avoided; also highly-spiced, rich, or stimulating foods. The bowels should be regulated by proper dieting and massage or exercise rather than by laxatives, and it is highly desirable that there should be at night uninterrupted sleep for six hours for mother and child.

Infantile Diarrhœa and Its Treatment by Sterilized Water.

Watu advocates the treatment of infantile diarrhœa by a regime of boiled water, cooled to a suitable temperature, and given in small quantities every hour or half-hour, or as thirst demands, to the exclusion of all food, for eight, twelve, or even twenty-four hours. By diluting the irritating secretions, dislodging the *debris* of decomposed alimentary matter retained in the folds of the mucosa of the canal, increasing the pressure in the blood vessels and dissolving the toxins attached to the formal elements, the ingested water carries away and eliminates the poison from the system, changes the morbid character of the stools and effects a reduction of the temperature and recovery, especially when administered in acute cases at their commencement and in children not very young.



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The Causes of Appendicitis.

Some points of interest, as recorded in the "Lancet" in connection with the pathogeny of appendicitis, were discussed at a recent meeting of the French Société de Chiourgie. The view of M. Dieulafoy, that the disease is a consequence of constriction with closure of the appendix, and the consequent retention of morbid material within it, did not find much favour.

On the contrary, several speakers referred to the frequent existence of this condition without appendicitis, and at the same time mentioned cases in which they had found a perfectly permeable appendix to be the seat of inflammation.

The general opinion of those who took part in the discussion was that appendicitis is usually only the local expression of a more or less general enterocolitis. The theory of M. Reclus is worth quoting as a more detailed statement of these opinions. According to him the problem of causation is capable of a double solution—(1) as being related to the presence of an actual foreign body in the appendix, a condition of course hostile to apontaneous recovery, and (2) as explained by a "theory of stagnation." This view regards the appendix and in a less degree the cæcum as diverticula which readily allow the accumulation within them of organic fluids, these in turn becoming the seat of fermentative changes. Inflammation follows as a natural consequence. In this comprehensive and moderate statement we shall probably find the nearest approach to explanation of a malady the clinical aspect of which is, as a rule, sufficiently obscure.

Affiliation of the College of Physicians and Surgeons with the University of Illinois is now definitely announced. Negotiations have been pending for some time, and the carrying out of the plan was at one time regarded as doubtful owing to various political reasons. It is given out that the present faculty is to be retained for the nonce, although unquestionably a reorganisation will take place later. The advantage of this affiliation seems to be about equally divided between the two institutions. On the one hand the College of Physicians and Surgeons has long been the only one of the three large schools not having a university connection, which cut it off from a certain dignity, paternal care, and direct class supply. On the other hand, the University of Illinois has long been the only one of several universities not having a medical department to swell its total number of students, to give a Chicago footing, and to be of political significance. .

Perforation of the Bowels in Typhoid Fever.

The advance of abdominal surgery is well shown by a paper in the Medical and Surgical Reporter of Philadelphia, Nov. 7, 1896, in which Dr. Joseph Price relates three cases of recovery following the closure of perforation of the bowels through typhoid ulcers. Of the third case he writes, "I never attempted to close a filthier peritoneal cavity than this, either *ante mortem* or *post mortem*."

Dr. Joseph Price urges that every case of perforation should be operated on, for surgery offers the only chance of recovery, although the mortality from such operations must always be high.

At the meeting of the Royal Medical and Surgery Society on Jan. 26th of this year, Dr. Lauder Brunton and Mr. Bowlby related a case in which symptoms of perforation of the intestine developed suddenly about a month after the patient was convalescent from typhoid fever. About eighteen hours after first onset of pain, the abdomen was opened, a perforation was found and closed by Lembert sutures, and the parts were thoroughly cleaned. Recovery took place, the patient regaining his normal weight in the course of a few months. It was stated that this was the third recorded case of the kind submitted to operation in this country, and the first successful one.

At the same meeting Dr. Herringham and Mr. Bowlby recorded another case in which the abdomen was opened owing to the occurrence of symptoms during convalescence from typhoid fever, but in which no lesion was found. The patient recovered. This case was brought forward to show that in cases of recovery from supposed perforation without operation there may not really have been any perforation at all. This is a most important fact.

Non-ligation of Umbilical Cord.

Kellar (Pacific Medical Journal) advocates non-ligation of the cord; he has practised it in more than 2,000 cases, and after careful observation of these and other cases summarises as his views: (1) Ligation in man is unnecessary because (*a*) it is not required at birth of any other animal; (*b*) the imagined necessity to prevent hæmorrhage does not exist; (*c*) to tie for cleanliness is superflous; (*d*) it is unreasonable to consider such an imperfection as need of ligature exists. (2) Ligation is in many cases injurious, (*a*) because it may justly be considered the cause of secondary hæmorrhage; (*b*) by interfering with desiccation, and thus preventiug separation, it gives rise to ulceration, with not infrequent consequences of erysipelas, fungoid excrescence, etc.; (*c*) it causes inflammation of funicular vessels by keeping them distended with unnaturally retained blood, hindering their normal obliteration, and laying foundation for phlebitis, jaundice, pyæmia, etc.; (*d*) by preventing normal escape of blood and thus causing hyperæmia and congestion of portal circulation, it may lay the foundation of numerous infantile affections apparently originating in congestion of these vessels. (3) Certainly in some, and probably in not a few cases ligature has been directly fatal; (*a*) numerous fatal cases attributed to ligation have been recorded by the highest authorsies; (*b*) it can be seen in the newborn that the ligature maintains the right ventricle in a state of distension, otherwise relieved by bleeding from the hypogastric arteries, and this prevents renewal of action if the heart has stopped, or hastens its stoppage if it is failing; (*c*) in many instances removal of the ligature has saved life when other remedies have failedt

Albuminuria in Gonorrhœa.

Colombini has made a study of this subject in 372 patients suffering from acute gonorrhœa, 72 being complicated by epididymitis. In none of the cases had any drug been administered, and there was no evidence of cystitis or any disease likely to cause albuminuria. The pus was carefully filtered off and five different tests for albumen were applied to the filtered urine. Out of the 272 cases, albuminuria lasting from four to thirty days was found in 66, and of these 42 had epididymitis, 24 simple gonorrhœa. The author believes that an ascending nephritis could be excluded in his cases as also the influence of any drug, and on the whole he considers that the albuminuria was due to a process of general blemorrhagic infection, comparable to that which occurs in other infectious fevers.

The Cocaine Habit in Chicago.

It is reported (says the New York Medical News) that the victims of the cocaine habit have become so numerous in Chicago that an ordinance has been introduced prohibiting the sale of remedies for catarrh and other diseases which contain cocaine. In the last two months over forty victims of the drug have appeared in police courts and elsewhere. Several of them have been well known men and women, who say they were brought to their present condition by using "catarrh cures."

Practical Evidence.

I used your sample of Resinol on myself for Pruritus Ani, which has been my curse for several years, defying all applications. The first application proved efficacious, and I am now using and prescribing Resinol for the above and several other itching troubles. In fact, I think it is the best remedy I have ever used for the diseases for which it is recommended.

H. B. LEIGHTON, M.D., Boston, Mass.

I have used your Resiuol in Inflammatory Rheumatism with happy results. Hope others will try it. I know they will be pleased.

E. J. BURNSIDE, M. D., Phila., Pa.

It gives me pleasure to say that Resinol is the best application for local treatment of Eczema I have ever used. I can also bear testimony to its efficacy in Erysipelas, and its soothing and healing virtues in all inflamed surfaces.

A. S. FRENCH, M.D., Lawrence, Mass.

It is but just that I should attest my satisfaction with the use of Resinol. It is a marvel of efficacy in Pruritus Ani. In relief of soreness, due to scalding from acute Nasal Coryza, it acts like a charm.

J. H. THOMPSON, M.D., Goshen, N.Y.

Resinol is by far the best application I have ever used in a practice of 48 years for the diseases recommended. A case of Eczema commencing on the scalp and extending over the entire face and which had been under the treatment of various physicians with no apparent benefit, was completely cured by it in less than two weeks.

J, J. WORTHY, M.D., Lavalle, Wis.

I am very much pleased with the effects resulting from the use of Ung't Resinol in cases of Itching Piles, Pruritus Ani, and Vulvae, Eczema, Erysipelas, &c. In fact it is the remedy "par excellence" in all cases where there is a Congested or Hyperaemic condition of the capillary Blood Vessels. C. D. SMITH, M.D., Atlanta, Ga.

I frequently prescribe Resinol, and am well pleased with its work. It has proved very useful in many forms of eruption of the skin, and especially so in Pruritus Vulvæ or Ani, and in Eczema of other parts of the body.

LUCY HALL BROWN, M.D., Brooklyn, N. Y.

I take pleasure in stating that I have found Unguentum Resinol almost a specific for Pruritus Ani, Itching Piles and Marginal Eczema.

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Resinol is a harmless antiseptic and a true skin anæsthetic, absolutely non-irritant and non toxic (free from lead, mercury, or cocaine), can be applied to mucous, excoriated or denuded surfaces of any extent at any age without fear of untoward results, and is not contra-indicated by any internal medication that may be deemed advisable.

Resinol is put up in *one ounce* jars at 50 cts. each, and can be obtained at any drug store.
Sample sent **free** on application, or **one** regular size jar for trial on receipt of 25 cents.

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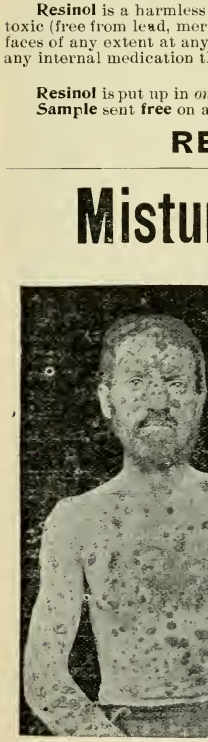
Mistura Quinqui Iodidorum.



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EACH FLUID DRACHM CONTAINS:

Arsenici Iodidum,	1-24 grains.
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Potassii Iodidum,	2½ grains.
Manganesii Iodidum,	1-5 grains.

In Secondary and Tertiary Syphilis this preparation is considered by all the leading authorities on the subject to be the best. It should be given in teaspoonful doses, three or four times a day, and continued for several months.

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CHARLOTTE, N. C.

Gonorrheal Ophthalmia—Report of a Case Treated with Argonin.‡

C. D. R., male, aged 33. First seen Nov. 25, 1896. Two weeks before, right eye became sore, for which he was treated by his family physician. It was extremely painful until two days before, when something seemed to give way and water gushed from between the lids, after which it became easier.

There was an abundant purulent discharge. The cornea was not clear at any point but had a fleshy appearance and bulged from the general curvature of the eyeball (total staphyloma).

The man lived at some distance in the country and failed to attend regularly, coming only once or twice a week. For two weeks he was treated in the usual way with boracic acid, bichloride and nitrate of silver with very little effect on the discharge, which was abundant from the time first seen. A microscopic examination by Dr. E. C. Anderson, chief of the Microscopic Laboratory of the Chattanooga Medical College, showed the presence of gonococci in abundance. The patient had gonorrhea.

Thinking this a favorable case to test Argonin, as the eye was hopelessly lost, a 5 per cent. solution was instilled into the eye. The application caused no pain and a solution was given to the patient for use at home. Four days later he reported that the discharge had almost entirely ceased after the first use of the Argonin. He had kept samples of the discharge, which were preserved on cotton swabs made by wrapping pledgets of cotton on toothpicks. These were sealed in envelopes as soon as obtained. An examination of these failed to show a single gonococcus. A sample of the discharge taken direct from the inside of the lid was found to contain a few, very few gonococci.

The Argonin was continued. A few days later the eye again became very painful. The tension was increased to plus 1 and the staphyloma was larger. The ball was incised and the clear lens escaped. There was no pus inside the eye. There was no further pain and the patient ceased his visits owing to sickness in his family. One of his neighbors reported that he had no further trouble. The fellow eye was unaffected during the whole of the treatment.

This case seems to indicate that Argonin can be used safely in the eye; that it is less irritating than nitrate of silver and from its wonderful effect on the discharge and development of the gonococci it appears to be the ideal remedy in purulent opthalmia. Further tests will demonstrate its true value.

‡Frank Trester Smith, A. M., M. D., Professor of Diseases of the Eye, Chattanooga Medical College. Chattanooga, Tenn., in the Journal American Med. Assoc., April 10th, 1897.

An Interesting Case.

Some weeks since I was consulted by Mrs. ——, white, aet. 20, married 18 months, for non-appearance of menses. The patient stated, during investigation of her case, that she had never menstruated in her life, neither had there been any vicarious hemorrhage. After a careful examination of her general condition, satisfying myself that she was not pregnant, but finding her somewhat anæmic, gave her a few general directions and a tonic suitable for her condition, with directions to report in a month.

At the end of that time she presented herself with no improvement in her condition. I advised an examination, to which she finally consented. A thorough examination was made, by myself, with the result of finding neither uterus or ovaries; the vagina was entirely absent; but the most interesting point was the size of the urethra. It would, in the undilated state, *admit the thumb and index finger* easily. On questioning the husband in regard to sexual relations, and as to whether his wife had any sexual appetite, he reported she had, also, that after intercourse she complained for several days of irritable bladder, and painful micturition, showing positively that he had intercourse through the urethra, into the bladder, that being the only available channel. My friend, Dr. John N. Upshuc, saw the case with me, and also examined her.

Ramon D. Garcin, M. D.
Member Richmond Board of Health.
Adj. Prof. Pract. Med., Med. College, Va.

It is my experience that the ideal sedative, the preparation that is the most potent in allaying the restlessness of typhoid fever, pneumonia and other acute diseases, is that well known chemically pure preparation, Peacock's Bromides. It is head and shoulders over any mixture of commercial bromides—therefore I use it—it gives the best results. I also find it to be a sterling remedy in the nervousness of rum drinkers. The restlessness and nervousness attendant in acute diseases can usually be controlled by a few half teaspoonful doses. It is well worthy of a place in the armamentarium of every physician.

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Ephrata, Pa.

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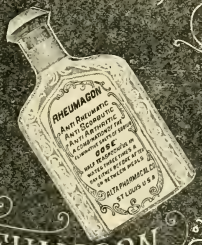

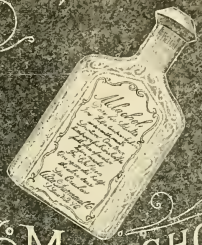

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IN LESIONS ULCERS
SKIN DISEASES
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STRONG NERVINE:
ABSOLUTE ANESTHETIC
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SEND FOR LITERATURE.

Tuberculosis Successfully Treated by Hagee's Cordial of Cod Liver Oil. A Report

By Wm, Clarence Boteler, M. D., Kansas City, Mo.

Paradoxical as it may sound to those remembering only the earlier taste of Cod Liver Oil, the present generation witnesses the conversion of what was until a comparatively recent date the most nauseous of our remedies, into almost a beverage for the invalid, a delightful Cordial in fact. That the taste of various preparations of this valuable remedy was an impediment to therapeusis from its disgusting features few will deny; but this was not all, the preparations in earlier use were loaded with extraneous organic and inorganic matters and unassimilable fat globules in excess of human power of digestion, hence the stomach soon became impatient of such duties, rejecting them and leaving the sufferer often badly treated.

We are due much gratitude to the progress of Science in every field but if we will consider the acknowledged value of the active principle of Ol Morrhuae in Tuberculosis and again pause to reflect upon the grave nature of the disease, the introduction of the electric light could not be of more value to invention, than the accomplishment of a combination of the active principles of Cod Liver Oil in a delightful Cordial, is to the consumptive.

Older physicians as we know tried to overcome both the repulsive taste and the indigestible nature of the remedy by the co-administration of whiskies; correctly inferring that in persons markedly subnormal as are consumptives, the vascularity of the digestive apparatus must be gently excited, to insure a free secretion of digestive fluids, the emulsifycation and assimilation of the oil.

This quaint practice with "Cod Liver Oil and Whiskey" foreshadowed, both chemically and therapeutically the present splendid achievement known ass Hagge's Cordial of Cod Liver Oil, perfected by the Katharmon Chemical Company of St. Louis. It compares with its ancestor as does the arc light with the tallow dip of Revolutionary times.

No less does the Cordial of Cod Liver Oil surpass former preparations in therapeutic value; it is soothing, stimulating and grateful, promoting appetite and assimilation in any of the varied phazes of phthisis pulmonalis, at any age from the cradle to the grave. The following report though lacking in completeness of repeated microscopic examinations of the sputum fully sustains the excellence of the remedy that words can but faintly portray. Patient Mr. M, W,, an adult, male, aged 37, occupation laborer and mortar mixer, consulted me Sept. 21st, 1896, with the following history: His mother had died when he was a child, and his father later "of lung trouble;" until three years ago he had exjoyed excellent health, worked regularly, and had no pulmonary symptoms; in Nov. 1893 he caught cold from being over heated at work and a fall of temperature; the "cold" resisted all treatment; cough persisted; night sweats ensued, a sense of constriction seemed to have settled in the upper part of his left lung, his cough was worse at night, he possessed an aversion to fatty articles of food, his appetite was poor, sometimes his expectoration was streaked with blood, he steadily lost flesh, until at the time of consulting me he was reduced from 163 to 121 pounds. A complete physical examination, coupled with this hereditary and clinical history, pointed to tuberculosis of the lung, the upper lobe taking little part in æration, The bacillus was easily detected in mucous scraped from the glottis.

Inasmuch as there had been no very pronounced hemorrhage and fearing its occurance, Mr. W., was at once placed upon improved regimen and diet, thirty drops of Fl. Ext. Ergot in two tablespoonful Cordial Cod Liver Oil, three times daily. The Ergot was continued about 30 days till the sputum cleared, then the Cordial was persisted in, until the present time. Dec. 24, '96, the lung was clear on percussion, excepting a small area at the apex, no cough, no night sweats, chest expansion increased from $\frac{3}{4}$ to $1\frac{1}{5}$ inches; expectoration clear, appetite good, urine high colored, bowels inclined to be loose, patient weighing 161 pounds; says he feels entirely well and expects to go to work at his trade as a mixer of mortar with the opening of Spring. This case can be called well, although treated as an out patient, if no backsets occur, within a short time and whilst I regret my inability to give periodic results of microscopic examinations of the sputum, the very remarkably prompt arrest of the retrogade processes by this remedy; and the adverse hereditary and personal history, justify the conclusion that in Hagee's Cordial of Cod Liver Oil we have an agent of unusual value and of ready adaptability to the flagging needs of the system in especially the first and second stages of this disease,—*The North American Medical Review.*

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Rogers City, Mich.

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Toilet of the Injured Eye.

At the meeting of the Texas State Medical Association, held at Paris, April 27-30, Dr. S. L. Terrell read a paper on the Toilet of the Injured Eye.

He laid great stress on the maintenance of cleanliness in these cases. In treating burns of the eye caused by lime he cautions against the use of water as a cleansing agent, as it adds to the distress by spreading the lime over the rest of the eye. Use oil instead. In injuries to the cornea, he advocates the use of the fluorescin test to estimate the depth of the injury.

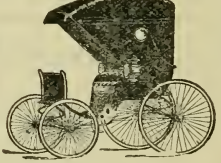
In injuries of the cornea, where the iris has prolapsed, keep the iris in position after replacing it by atropia if the prolapse be central, and eserin if it be peripheral. In injuries to the lens, the physician is cautioned to watch the case, and if there be an uncontrollable, rapid swelling remove it at once to keep down the intra-ocular tension. An eye that has had the ciliary body injured needs the closest attention, as inflammation of that portion leads to very alarming symptoms, and may affect the other eye sympathetically.

In all cases of injuries to the eye ball the eye should be thoroughly examined to see that all foreign bodies have been removed from it. The indications of a foreign body in the eye are pain, photophobia, sensitiveness to pressure, and visual disturbance at one time unexplainable by any visible external injury.

According to statistics, collected by Wildman, the per cent. of loss of the eye from foreign bodies is, if the foreign body is in the anterior chamber 0 per cent., if it is in the lens 30 per cent.; if it is in the vitreous 11 per cent.

He recommends as an antiseptic wash for the eye a saturated solution of ac. boric in camphor water.

THE COLUMBUS PHAETON CO.



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Xeroform and its Use in Surgery.

Dr. Josef Grunfeld in Wiener Medicinische Blatter, January 7th and 14th 1897, says:

It is quite embarrassing to write in advocacy of a new preparation nowadays. For a number of years past chemistry has been pouring in upon us a very flood of new remedies, for each one of which all manner of good qualities have been claimed. "Many are called, yet few are choosen," and the majority of these new remedies have had the ephemeral life of a summer butterfly, and have soon disappeared, leaving only disappointment behind. It is not surprising that new preparations are now greeted with distrust when they appear. And if, in spite of all ths, I venture to make a public plea for Xeroform, it is because I am absolutely convinced that we possess in it a most valuable antiseptic agent.

It has a whole series of advantages over all the older antiseptic remedies; quite sufficient to make it most desirable for practical use.

1. Xeroform not only possesses a powerful antibacterial action, but also renders the poisonous and ptomaines innocuous, on account of the ease with which bismuth is separated from it, which forms insoluble combinations with these noxious products.

2. Xeroform has a very marked dessicating action, and limits and prevents secretion. Secretion is reduced to a minimum, and the surfaces and edges of aseptic operative wounds adhere together with the greatest rapidity. In suppurating and infected wounds the production of pus is greatly diminished in an astonishing short time. The amount of secretion is small, and what there is of it is absorbed, dried up, and kept from decomposition by the Xeroform dressing; hence the latter may remain in place for days without becoming saturated with the discharges. The dressing upon removal is found to be *odorless*, filled with dried secretion, and often firmly attached to the wound. Xeroform is especially suitable for permanent and dry dressings; in fact, properly applied, it is the dry dressing par excellence.

3. Xeroform is a very powerful deodorizer. The small amount of secretion that is effused from aseptic operation wounds is entirely without smell. Even in infected and suppurating wounds and ulcerations the discharges have not the usual sickening and repulsive odor- This is especially noticeable in wounds that are connected with the gastro-intestinal and the genito-urinary tracts, the secretion from which is notoriously foul-smelling. When Xeroform is employed it becomes almost completely odorless. This remarkable effect is to be explained by the fact that the sulphur combinations that give rise to the odors unite with the bismuth to form the odorless sulphate; this is proved by the fact that in these cases the Xeroform gauze always becomes blackened.

4. Xeroform irritates neither the wound nor the neighboring soft parts. Even in very extensive wounds, such as amputations of the breast with removal of the axillary glands, there is neither redness, swelling, nor œdema of the margins of the wound after the dressing has been in place for several days.

5. Xeroform relieves pain. As soon as the bismuth that is contained in it is released from its combination by the action of the secretions from the wound, it is precipitated on the surface of the wound as a covering which protects the exposed and sensitive nerve endings. None of the patients that I have so far treated with Xeroform complained much of pain; and in many cases there was complete analgesia.

6. Xeroform is absolutely non-poisonous. It has been administered internally in daily doses of even 5.0 to 7.0 grams (75 to 105 grains) by Hueppe without doing any harm. Any chance of poisoning from external use is out of the question, since small quantities only are required to produce its full effects. I have never seen irritation of the nervous system, or disturbances either of the gastro-intestinal tract or of the kidneys from its use.

Xeroform acceleretes granulation and cicatrization. This is clear from the universal reports of shortening of the time of healing; but it is especially noticeable in old wounds with weak and feeble granulations, that have been treated by other methods. Here the application of Xeroform causes the granulations to assume a healthy growth, and rapid and undisturbed cicatrization ensues.

8. Xeroform has a hæmostatic action. This is to be attributed, on the one hand, to the fact that it causes rapid coagulation of the blood; and on the other hand to its dessicating properties, which speedily give the blood clots the necessary firmness and adhesiveness.

9. Together with the absence of pain and irritation in the local disease process the amount of general functional disturbance in the vast majority of cases is very slight, and is often altogether absent. Even every operative procedures ran their course without any fever at all.

I would also call attention to a non-surgical process in which Xeroform has shown itself to be extremely efficacious, namely the moist forms of eczema. I tried the application in an acute iodoform eczema that oc-

curred on the fingers and the backs of the hand in a patient suffering from caries of the left middle finger. It spread in spite of the ordinary treatment for the disease. The results of the Xeroform treatment surpassed my utmost expectations. In 24 hours the eczema was entirely cured with a single application of the dressing. I thereupon used Xeroform repeatedly in moist eczema, both acute and chronic, with the best effects, and this was especially noticeable in the moist eczema that were mycotic in their origin. On account of the great tendency in eczema to the formation of crusts and scabs, a very thorough cleansing of the affected parts was effected before the powder was applied.

I employed Xeroform externally in powder form, as a gauze (10, 20, 30 per cent,) as an ointment, in 10 per cent, suspension, as a pencil, and in suppository. The method in which I used it was exactly the same as that for iodoform. The cavity or wounded surface was dusted with a thin layer of Xeroform, and then covered or tamponed with the Xeroform gauze. Xeroform gauze can be sterilized at 110 deg., C. (230 deg., F.) Irrigation with an antiseptic fluid may precede the dressing; but I purposely refrained from doing this in a number of my cases, only cleansing the field of operation with sterilized swabs. There was no difference in the course of the wound; a fact that speaks volumes for the disinfecting powers of Xeroform.

Since the effect of Xeroform is only developed when it comes in contact with the tissue fluids, it is absolutely necessary to remove with the utmost care all scabs, crusts, scales, fragments of necrotic tissue, clots pus, and detritus from the wound and its vicinity before it is applied. This process must be repeated at each change of the dressing; since without it the Xeroform may remain perfectly indifferent, and even give rise to pus retention under the new formed scab.

Expected Honours for Doublin Medical Men.

It is rumoured that on the occasion of the Queen's Diamond Jubilee several prominent members of the medical profession in Dublin will receive the honour of knighthood. Amongst those whose names are mentioned as probable recipients of this honour are:—Dr. Thompson, President of the Royal College of Surgeons; Dr. Duffey, President of the Royal College of Physicians; Dr. Grimshaw, Registrar General; Dr. T. More-Madden, of the Mater Misericordiæ Hospital; and Dr. James Little ex-President of the College of Physicians.

Pancreatitis Followed by Cyst of the Pancreas.

At the meeting of the Association of American Physicians, held at Washington, D. C., May 4–6, last, Dr. Alexander McPhedran, of Toronto, read a paper on "Pancreatitis Followed by Cyst of the Pancreas."

In it he gave a case in a man aged 53, who had a history of repeated attacks of colic, apparently due to gall stones. There was well defined jaundice with the earlier ones.

In 1895 his health was poor, and in September he had a severe attack of pain which was not relieved fully for 3 days. There was tenderness in the region of the gall bladder, and on deep pressure some apparent thickening could be made out. A few days later a sudden accumulation of serum took place in the omental bursa, forming a large epigastric tumor. This was evacuated, and through the incision an elongated somewhat lobulated mass could be felt in the situation of the pancreas. There was no appearance of hemorrhage anywhere.

The general condition improved, but the tumor grew steadily until March, 1896, when it protruded the epigastrum and extended down to the level of the anterior superior iliac spine. The stomach lay in front of the upper part and the colon along its lower border. The liver and diaphragm were pushed upwards. The cyst was opened and drained by an incision in the median line above the umbilicus. The fluid was opaque and whitish, and possessed no digestive power. It was sterile. Later the discharge was shown to contain pancreatic ferment; now and again it caused excoriation of the integument about the opening. Complete recovery followed, except that the fistula persists to its original depth of over five inches, and there is a variable quantity of discharge.

It is thought that probably the repeated attacks of colic preceding the cyst formation were pancreatic rather than biliary. The sudden effusion into the lesser peritoneal cavity was doubtless caused by pancreatitis with which there was no hemorrhage. Of the two cystic formations forming in this case, the first was simply a collection of serum in the omental bursa, while the second was a true pancreatic cyst. Unfortunately the term pancreatic cyst is used loosely, to indicate any kind of cyst in the pancreatic region. Many of these cysts, like the first of these, are but effusions into the omental bursa, or transverse meso-colon. This is especially true of cysts forming after injury. It is desirable that in future the two conditions should be carefully distinguished as far as possible.

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Awarded to Charles Marchand's Glycozone by World's Fair of Chicago, 1893, for its powerful healing properties. This harmless remedy prevents fermentation of food in the stomach and it cures:

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The Semi-Centennial Meeting of the American Medical Association.

The semi-centennial meeting of the American Medical Asseciation, which will be held in Philadelphia on the 1st, 2d, 3d and 4th of June, 1897, bids fair to surpass in the character of the entertainment, the scientific papers and the number in attendance any meeting which has heretofore been held. The Committee in charge have been able to obtain large and roomy places of meeting for the general meetings and the Section meetings all within a single block and within very short walking distance, or immediately adjacent to the largest and most comfortable of the Philadelphia hotels.

For the week preceding and following the meeting the Committee of Arrangements have also arranged for Clinical Courses which will be open without charge to all physicians who may visit the city at that time. These courses cover every branch in medicine and its specialties, and will afford visitors the opportunity of seeing the active clinical work of all the great teachers of Philadelphia, which is now, as it has been for so many years in the past, in every respect, the medical centre of the United States.

The Reflex Action of Certain Rectal Diseases Upon the Nervous System.

Dr. Rufus D. Mason, of Missouri Valley, Ia., read a paper at the Iowa State Medical Society, held at Marshalltown, May 19–21, 1897, an abstract of which is as follows:

Many functional disorders and painful manifestations result from the reflex action of lesions in or around the rectal and anal region. Owing to the very close and intimate relation existing in this part of the body between the general and sympathetic system of nerves the reflected effect is easily brought into action.

This effect is also increased by the constant natural movement of the parts and the artificial irritation of injections and purgative cathartics, especially those of the class to which aloes belongs.

Cases of the most severe lumbago and neuralgia have been caused by an abscess in the Ischio-rectal region. These cases are ones of *localized* reflection. Many cases of supposed phthisis have died from rectal ulcer with its diarrhœa and emaciation.

In the latter case the action is in the nature of a *general* reflex, and has its effect upon several important nerve centres. These cases are characterized by a lowering of nerve power, or a *leakage of nerve force*, which like the waste of steam in an engine, lowers the machine. This loss of nerve power, or vitality, interferes with the function of glands or organs whose healthy action is necessary to the health of the body.

The diagnosis is generally not hard to make, and a very careful physical examination should, in all cases be made. When the cause is determined the treatment, of course, consists in removing it when the effect will go with it.

"Is there a typho-malarial fever? Yes, in the brains of the doctors, but not in the bodies of the patients. There is no combined hybrid disease, and it is only due to Woodward to say that he did not recognise a hybrid disease. Typho-malaria is a villainous name, and should be banished from our vocabularies and no doctor should ever use it."

Dr. J. R. Andre, of Baltimore, Md., writes Feb. 25th, '97: "I am using Neurosine in my practice and find it the most efficient remedy in Nervous Diseases and the very best Hypnotic, without the detrimental after effects from the use of Opium, Morphine or Chloral."

Norwich Pharmacal Co.,
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Gentlemen:—The sample of Unguentine which I received from you1 hands has proven very satisfactory to me in dressings for a number of different conditions, where the soft parts were ulcerated and in an unhealthy condition. I believe it to be an addition to our valuable remedies with which every practitioner should be familiar.

Respectfully,
E. R. Lewis.
Kansas City, Mo.

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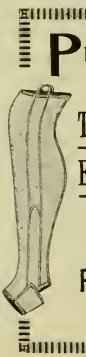
and won't rip—the stays prevent it



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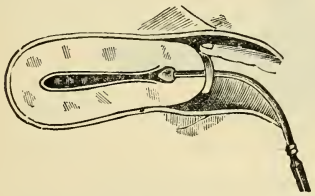

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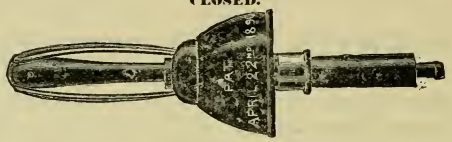

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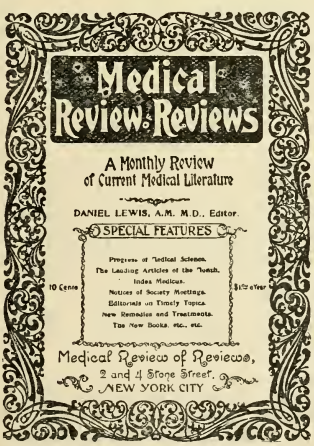
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Ar. Hamlet	6 53pm	.....
Lv. Hamlet	7 13pm	*5 10am
Lv. Rockingham	7 30pm	5 23am
Lv. Wadesboro	8 11pm	.....
Lv. Marshville	8 48pm	6 25am
Ar. Monroe	9 12pm	6 43am
Lv. Monroe	9 55pm	7 30am
Ar. Charlotte	10 25pm	8 30am
Ar. Mt. Holly	.....	9 10am
Ar. Lincolnton	.....	10 35am
Ar. Shelby	.....	11 43am
Ar. Ellenboro	.....	12 20pm
Ar. Rutherfordton	.....	12 54pm

†8 40am	Lv. ..... Hamlet	Ar.	6 20pm
10 00am	Ar. ..... Cheraw.	Lv.	†5 00pm

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Lv. Shelby	.....	6 03pm
Lv. Lincolnton	.....	7 00pm
Lv. Mt. Holly	.....	7 50pm
Lv. Charlotte	*5 10am	8 25pm
Ar. Monroe	5 58am	9 10pm
Lv. Monroe	6 05am	9 40pm
Lv. Marshville.	6 25am	.....
Lv. Wadesboro	7 01am	10 31pm
Lv. Rockingham.	7 41am	11 05pm
Ar. Hamlet	7 55am	11 23pm
Lv. Hamlet	8 45am	.....
Lv. Laurinburg	9 11am	.....
Lv. Maxton	9 30am	.....
Lv. Lumberton	10 18am	.....
Ar. Wilmington	12 30pm	.....

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The Charlotte Medical Journal.

Vol. X. CHARLOTTE, N. C., JUNE, 1897. No. 6.

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Modern Obstetrics.

By S. L. Montgomery, M. D., Concord, N. C.

The time allotted me in which to read this paper will permit, me only to touch upon some of the most important subjects engaging the minds and thoughts of the profession today, and while I view with pleasure and pride the rapid strides that have been made in the other branches of medicine, I feel that, with all the instruments and devices, the works of strong minds, the death rate in child bearing has not been materially lessened.

From the information I can gather on this subject, I find that we are only a few steps in advance of our fathers of fifty years ago. I do not deny that many lives have been saved by the modern obstetrician, but who can count the number of mothers sleeping the everlasting sleep of death as the result of the indiscriminate and unskillful use of the forceps. He who applies the forceps simply for the purpose of saving time, places time above the life of the mother and her unborn child. I know that it requires patience to sit and count the stars through cracks of the log cabin when we have calls urging us to the palace, but the physician who would neglect the cabin for the palace deserves an everlasting abiding place among the demagogues who imposed

*Read before the North Carolina State Medical Society at Morehead City, June, 1887.

a tax of ten dollars upon us for caring for and serving the poor and distressed of the hovels.

A source of much harm, in my opinion, being practiced today is the vaginal douche. Prof. Lusk, according to Modern Medicine, expresses himself as strongly opposed to the vaginal douche before and after parturition. While the vaginal canal abounds in micro-organisms, he considers that they only intensify the acid reaction of the vaginal secretions and render the latter especially unfavorable to the multiplication of the streptococcus, said by many to be the germ that produces puerperal septicemia. The normal vaginal secretions furnish a soil hostile to all forms of cell growth. The cervical canal of the pregnant woman is protected from the invasion of micro-organisms by a mucous plug, and thus in natural labor the protection of the uterine cavity is complete. The entire parturient act furthermore serves to guard the woman against infection.

With the rupture of the membranes the downward current is produced by the escape of the amniotic fluid. The descent of the child cleanses the vaginal canal, and the increase of the vaginal secretions is inimical to the action of the septic germ. Finally, the passage of the placenta completes the toilet of the vagina. The fact that nature provides this excellent means of self-defence clearly shows that the disturbing method of disinfection employed, before and after labor, under the plea of prophylaxis, is not commendable. The antiseptic douche dissolves the mucous, sets free imprisoned germs, weakens the resistance of tissue, and contributes to the extension of the source of infection.

Meddlesome midwifery is wrong in every case in which it is practiced. Are the forceps used many times now where they were used very rarely years ago? I think so, and would ask you if the comparative results justify this use. Are there not other means to alleviate the pains of the parturient woman and assist nature in her efforts to complete the labor? other than forcibly dragging the child into the world, often before the parts are ready for its passage, the only excuse being that labor has lasted twenty-four or thirty-six hours. Are we not making too frequent examinations? The condition having been ascertained to be normal, diagnosis of position made and degree of dilatation of os known, is it necessary to annoy and often endanger the health or life of the woman by frequent examinations, often prompted by our own impatience? Are we not often rupturing the membranes too soon, and are we not leaving our cases in the care of nurses, telling them only to send for us when they are sure of a speedy completion of the labor? Is this not leaving them to act for us, and by our commands—one of the worst forms of meddlesome midwifery? as they can only ascertain what we require them to know by unskilled, frequent examinations. The second stage completed, are we not in too great a hurry to cut a pulsating cord and forcibly express the placenta or introducing the hand to remove it? Would it not be more scientific to wait a reasonable time for its separation and expulsion, and allow nature to complete the third stage, as well as the first and second? Is not any interference with normal labor, or any other, aside from assisting nature should she flag in her efforts towards its completion, unless demanded by threatening danger to the mother or child, meddlesome midwifery? Are we not in our great haste losing sight of our obligation to consider the interest of the mother and child, as paramount to all others, no matter what outside interests suffer by our detention by the bed side? From the time we enter her room and take charge of the case our duty is to her and her unborn child only. Needless hurrying the labor, or leaving too soon after the birth of the child, violates that obligation.

I remember about two years ago I was called to attend a young woman in her first confinement. I reached the home about one or two o'clock in the morning. The labor, which was a perfectly normal one, lasting about seven hours. I left in a few moments, being in a hurry to see some other patients. Just as I was leaving the woman remarked that she believed she was having a chill, having had two or three chills before her confinement. I paid but little attention to her remark, thinking probably she had a nervous rigor or a malarial chill.

I saw her husband on the streets about four or five hours after leaving his home in the morning and he told me that his wife had a very high fever from the chill. I went immediately to see her and found her with a temperature of 104½, pulse 130. I gave her an antipyretic; called at 8½ o'clock next morning; temperature 104, pulse 120, small and weak. I began to think seriously of my diagnosis. Was it malarial or septic or both? If septic from what source did it come. I washed my hands with soap and water, which I generally find sufficient. If septic, why in such a hurry, for she had the chill before I left the house, which was not exceeding fifteen minutes after the birth of the child. Till this day I have never been satisfied thoroughly as to the diagnosis of this case. The woman recovered after a hard struggle of three weeks. At my morn-

ing visit on the fourth day I found slight tympanitis with acute tenderness over the entire abdomen. I also found a scant and very offensive vaginal discharge. Had I remained with this woman an hour the result, of course, would have been the same. But suppose the case had been one of post partum hemorrhage. The woman would have been dead, in all probability, before a physician could have been secured. My duty was at the bed side of that woman, and I should have remained there the proper length of time.

Only a short while ago I was called to see a woman in her tenth confinement. Her sister, in giving a history of the case, said the patient had been passing large clots of blood for several hours. In making my examination I found the os patulous, but not dilated. Pains had ceased. I remained for a while, the pains not returning, and no clots passing, I went to my office, leaving instructions with the family to call me when the pains returned, or more clots passed. I was recalled in about five hours; found the woman with strong, frequent pains, and almost alarming hemorrhage. Examination revealed the os dilated to the size of a silver dollar. Assisting nature with my thumb, index and second fingers, dilatation was soon complete. I ruptured the membranes, the head came down and the hemorrhage ceased at once. Labor was completed in a short while. The child dead. The woman rested quietly for twenty minutes, when she was seized with violent pains again. Having previously satisfied myself that another fœtus had not been left in the womb, and the pains being too severe for after pains, I was at a loss to know the cause of these pains, and in making my examination for this purpose, my hand came in contact with a great mass of something, I knew not what. I carried it to the rear yard and found it to be a blood clot four inches in circumference and six inches in length. Why that clot was not expelled with the placenta I am not able to say. Had I left this case as soon as I did the one just reported, I should have felt that my entrance to that home again would have been a just cause for the wrath and condemnation of that family forever.

I hope no member of this society will think me opposed to any means known to obstetricians, when we have to resort to such means to save life. On the other hand, I think it the duty of every physician who practices obstetrics to face and meet any danger that may confront him, and he who is able to do this has accomplished for himself a name that will be sung by father and mother throughout his country. We all know that there hangs upon us a heavier responsibility in obstetrics than any other branch of medicine. The eyes not only of the family, but the neighborhood, are upon us, and if the patient passes away, notwithstanding we feel ourselves competent and know we have done our full duty, the death of the woman is laid at our door. We should, however, console ourselves with the fact that there is a higher, better reward than reputation, that is the consciousness of duty performed. Let us go forward then, doing our whole duty, and nothing but our duty, "holding fast to that which is good," despising empiricisms, relieving the suffering and driving back the death angel, and when we shall pass away, though no temple may be erected to us at Epidaurus your name and mine, your character and mine, "will escape the consuming conflagration of reproach."

Menstrual Disorders.†

By Annie L. Alexander, M. D.,
Charlotte, N. C

Menstruation is a physiological process, and should be absolutely painless. To say that 90 per cent. of women suffer from some form of menstrual disorder would not be putting the per cent. too high. That this is true may be attributed, in many cases, to the so-called higher civilization. Menstrual disorders, strictly speaking, cannot be said to be a disease, but symptomatic of some other disease.

The most frequent disorders of menstruation, with which we have to deal, are: Dysmenorrhœa, amenorrhœa, menorrhagia and metrorrhagia, and the irregularities dependent upon the menopause.

Dysmenorrhœa is the most frequent of these disorders that I am called upon to treat.

The disturbance may be so slight as to scarcely call for professional aid to relieve, or again, the pain is so intense as to throw the unfortunate woman into convulsions. Many women are miserable for one week out of every four, frequently spending the time in bed.

Ovarian and peri-uterine disease frequently complicates menstruation, but where the pain is due to diseased tubes, ovaries and peri-uterine tissue, it is not dysmenorrhœa. Women with peri-uterine disease frequently have increased pain at the menstrual epochs, especially when they are up and about, but this is due to the accompanying congestion and the influence of gravity, and not to the flow.

†Read before the North Carolina Medical Society at Morehead City, June 8th, 1897.

The menstrual flow, as is well known, is caused by changes that take place in the lining membrane of the uterus, and the pain that ensues is due to an inflamed or hyperæsthetic and indurated condition of the endometrium at or near the internal os, with more or less obstruction due to the induration, or flexion perhaps, at this point.

In such cases the passage of the sound will cause the same aching pain felt during the menstruation.

The hyperæsthesia and indurated condition of the tissues, so often found in cases of dysmenorrhœa, is frequently the result of imperfect development and atrophy,

Flexions and displacements of the uterus do not, of themselves, cause dysmenorrhœa. I have seen a few cases of flexion so marked that it was almost impossible to pass a sound, free from dysmenorrhœa. The majority of cases of flexion have dysmenorrhœa because of an attending hyperæsthesia. Dilate the cervix, cure the hyperæsthesia and the dysmenorrhœa disappears, although the flexion remains.

When the stem pessary is used it not only relieves the dysmenorrhœa but straightens the canal, and a change is brought about in the lining membrane, which frequently results in a permanent cure of these cases. I have in mind a lady who suffered intensely each month. A day or two before each expected period, I inserted a stem pessary, curved to fit the small retro-flexed uterus. The hyperæsthesia was marked. She would menstruate comfortably, and then I would remove the pessary, to replace it the next month. Each time I would have the stem a little less curved. After five or six months treatment she is well. The hyperæsthesia has disappeared and the retro-flexed uterus is straight.

Dysmenorrhœa is more common among the highly educated and well to do classes than among the laboring classes. The cause is obvious. Among the poor the sickly, delicate children die young. As the children of the rich reach puberty, the girls are deprived, to a great extent, of fresh air, sunlight and exercise, and are compelled by custom to lead lives totally at variance with conditions best calculated to allow the proper development of their bodies. Just at this time they are in school and all their available force is used for intellectual work when the generative organs should be developing. Even when their hygienic surroundings are of the best, and a good constitution is inherited, if emotional and intellectual work is forced upon them when the generative organs should be developing, they will be likely to suffer from dysmenorrhœa due to imperfect development of these organs. Give these organs the best opportunity of developing, by giving fresh air, sunlight, open air exercise, and at this period of life, when a girl is passing into womanhood, do not allow her to exhaust her vital forces by emotional or intellectual work, and we will have fewer of these cases to treat. Bicycle riding is preventive and curative of this trouble in many cases.

In treating these cases I hesitate to examine young girls. After getting the history of these cases I order the best hygienic surroundings, fresh air, exercise, bicycle riding, (in select cases) if there is no intermenstrual pain, diversion from intellectual pursuits. The medicinal remedies, which have given me the most satisfactory results, when the general health is not impaired, is Hayden's viburnum compound and liquor sedans. When this treatment fails an examination should be made. In many of these cases a small undeveloped uterus, with a long hard pointed neck is found. I usually begin the treatment by using pledgets of cotton, saturated with a mixture of glycerine 15 parts, boroglyceride 1 part; these are applied two or three times a week, remaining 24 hours, followed by a vaginal douche as warm as can be borne. These applications cause a free watery discharge, and in two or three weeks the cervix is softened, and less sensitive to touch and the introduction of the uterine sound. In many cases this simple treatment will relieve the trouble. In more obstinate cases it is necessary to dilate the os internum under strict antiseptic precautions, and make an application of pure carbolic acid or tincture of iodine, the cervical protector being used. Usually two or three dilatations, between the menstrual epochs, are sufficient. Any acute inflammation of uterine or peri-uterine tissues should be relieved before resorting to dilatation. Where dilatation fails, divulsion and incision or modification of Sims' operation, becomes necessary, or even a removal of the appendages, to bring about the menopause in some of the most severe cases.

Amenorrhœa may be caused in two ways: by debilitating influences on the general system, and by local disease or imperfect development, or atrophy of the generative organs. During an active debilitating disease, or convalescence, amenorrhœa is expected and desirable. In chlorosis and anæmia it is especially desirable. When menstruation exists with well marked anæmia, it points to an abnormal condition of the endometrium, and we should bring about amenorrhœa by treating the local trouble. As the anæmia or chlorosis is cured, as a rule, the menstruation returns. When amenorrhœa exists, after the general

health is restored, local treatment should be resorted to, to prevent further atrophy and to stimulate the uterus and adnexa to complete development. We should examine into the history of the case with care to determine if the undeveloped hyperæsthetic uterus is due to congenital influences or to the influence of some debilitating disease or bad hygienic conditions during the period of development of the generative organs.

Extreme mental emotion, exposure to cold at the menstrual epoch, change of climate, a sea voyage, will cause a temporary suppression in many women. These cases are not so serious as the amenorrhœa of young women who use up their vital forces in intellectual pursuits to the detriment of their generative organs. These organs are the last to develop, and not being necessary to mental or physical work, they are the first to fail. One of the first indications of this trouble is delay in its appearance and suppression after it begins. This lack of development is the greatest cause of amenorrhœa, dysmenorrhœa, and one great cause of the frequent lacerations of the cervix during parturition.

Almost all that is true of amenorrhœa is true of scanty menstruation, and the treatment is similar.

Amenorrhœa may be due to absence of uterus, or ovaries congenitally, or by operation.

Treatment.—Little good is gained by giving medicines, except as they improve the general health and condition of the blood, as for instance, the use of iron in anæmic and chlorotic patients. If the amenorrhœa continues after the general health is restored, special treatment is called for, which is very much the same as used for dysmenorrhœa in the undeveloped uterus. Electricity applied regularly over the ovaries and to the cavity of the uterus stimulates development in some cases. Where pregnancy is suspected, of course intra-uterine examinations are out of the question.

Menorrhagia and metrorrhagia, as a rule, indicate local disease, or change in the lining membrane due to disease. As has been pointed out, amenorrhœa is the rule in certain diseases which change the condition of the blood. When menorrhagia occurs under such conditions a careful examination will show an abnormal condition of the endometrium, such as fungus granulations which will account for menstruation at all. Sometimes menorrhagia is due to some disturbance of the general circulation by mitral disease, pressure of large tumors, etc.

Local conditions that cause menorrhagia are those in the uterus and those of the adnexa and peri-uterine tissues. In acute inflammation of peri-uterine tissues there may be menorrhagia or metrorrhagia; this flow often gives relief.

Myomatous fibroma and other tumors sometimes cause hemorrhage. It is not uncommon to find large fibroids of the uterus which do not bleed excessively at any time. In considering an operation for hemorrhage with existing fibroid it is well to try curetting of the uterus first.

Subinvolutions, with granulations, especially after abortions, in many women, causes hemorrhage. Sometimes we meet with cases where there is apparently no cause for the hemorrhage.

A young girl, 17 years of age, came to me for treatment. She was a finely developed country girl; had not exhausted her vital forces in emotional or intellectual work. The menstrual flow had continued for eight weeks. She had a previous attack five months ago, lasting four weeks. She was put to bed, ergot was given, hot douches used without benefit. The hot water arrested the flow for two hours, when it returned as freely as before. Examination showed a uterus normal in size and position; no hyperæsthesia; no granulations: no diseased adnexa.

After dilating the cervix, I swabbed out the uterine cavity with tincture of iodine, ordered a cold douche twice daily, and gave liquor sedans. The flow became less immediately after using the iodine, and in three days ceased entirely.

Cancer in women over 35 is the most frequent cause of metrorhagia. On account of the importance of recognizing this disease early, it is the doctor's duty to insist upon a local examination as a means of diagnosis.

To cure menorrhagia or metrorrhagia, local treatment must be given in the most of these cases. Internal medication is rarely of benefit unless the general system is at fault. In a few instances I have found ergot combined with fl. ext. hydrastis of of value in bleeding.

Avoid the use of tampons, they are generally worse than useless. After having prepared the patient, dilate the cervix uteri with a steel dilator, and with a sharp curette remove granulations or retained placental pieces. The attending hemorrhage can be quickly controlled by injections of hot or ice cold water. I never use the gauze packing, as I get better drainage without it, and it is a very painful process. By cleanliness and antiseptics the danger in the use of the curette is reduced to the minimum,

Menopause.—A perfectly healthy woman, not having any local disease, should cease menstruating without any general or local disturbance, at about 45 or 48 years of

age. It is generally believed by the profession and the laity that it is natural for women to suffer from hemorrhage and reflex nervous symptoms during the "change of life," and nothing is thought of it unless the woman's life is endangered from loss of blood, or insanity is imminent.

Premature menopause, that is coming before 40, may result from prolonged amenorrhœa, after some debilitating disease, resulting in atrophy of the generative organs. Removal of the tubes and ovaries does not always bring about the menopause.

If menstruation is too profuse, or too frequent, a careful examination should be made. Fungus granulations and polypi are especially apt to occur at this time. Some women menstruate after they are 50: but if the flow is too profuse, with nervous symptoms, hot flashes, &c., if the cervix is dilated, granulations or polypi will frequently be found, the removal of which will cause the menopause to come about normally. Dilatation of the cervix occasionally, will relieve the nervous symptoms.

The Specific Action of Quinine in Malaria.†

By E. C. Register, M. D., Charlotte, N. C.

The evident confusion that exists among medical men as to whether malarial fever ever continues after the plasmodium malariæ has been removed from the blood, and the tendency to discredit the ability of quinine to destroy this parasite, in all of its forms, is my excuse for presenting a paper on a subject that is, in many respects, already familiar to us.

I am in sympathy with the belief that a malarial fever, without complications, will subside after the plasmodia of malaria disappears from the blood; that we have in quinine the means to completely eradicate malarial poison from the body; that malarial fever occurring in a previously healthy subject, and in the central United States, if at once recognized and properly treated never ends in death; that it is speedily curable, never continues, provided the nature of the disease be recognized and appropriate treatment employed.

When we speak of continued fevers, especially in North Carolina, we mean either typhoid fever, continued malarial fever, or a simple continued fever.

I feel that it is my duty, and it is one of the objects of this paper, to contribute my efforts to influence the disease or, as much as possible, to obsolete the term continued malarial fever. Its prevalence conflicts with established facts in therapeutics; it means that quinine is not a specific in malaria; that the malarial parasite lives and multiplies within the body regardless of the amount of quinine ingested; that our repeated demonstrations of its specific action in malaria has been a dream, and that we erase, from our already small list of specific remedies, the most prominent.

There are no longer differences of opinion as to the causes of these respective fevers, especially of the two former. The physical properties, the prominent characteristics, and the general behavior of the typhoid bacillus, are perfectly familiar to the pathologist and bacteriologist. The same can be said of the plasmodium malariæ, and the pigmented bodies described by Loveran. All medical men agree that these pathogenic organisms are responsible for those fevers.

The cause of the third condition of pyrexia is not so clearly understood. Many abnormal conditions of the system, however, may participate in the cause or production of a simple continued fever. A high temperature does not necessarily mean that there are specific germs in the body which are acting upon the thermic nerve center, for it is known that several abnormal conditions of this center produce high temperature when pathogenic germs are absent. So far as I know, the function of every organ in the body depends upon two opposing nerve forces, the accelerator and the inhibitory. Any condition that causes confusion, discord, or a deviation from the normal mechanism of these two forces, is likely to produce a high fever, either by an overproduction of heat or its imperfect dissipation. In this way it is explained why it is that patients suffering with any febrile condition develop rapidly a very high temperature, when their nervous system is exercised to any great extent, either by fear, joy, anxiety or responsibility.

This increase of fever is not due to the presence of a micro-organism in the body, but either to an over-production of heat due to an excited thermic centre or an inability on the part of the inhibitory nerves to regulate the dissipation of heat in proportion to its production. While fever can be produced and continued in this way, and its etiology not in any way dependent upon pathogenic germs, yet, by far the most common cause is the action of some form of bacteria upon the thermic centres, and the usual birth-place and channel in which these

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bacteria find their way into the circulation is the digestive tract. Whenever from a mental, physical or diseased cause the normal process of digestion is impaired, we have in the stomach a defective acid secretion, an increased bacterial fermentation and possibly a production of chemical poisons, if absorbed, which is often the case, our patient suffers with chilly sensations, a tired feeling, headache, a feeling of heaviness and fullness in the stomach. A patient in this condition soon develops fever, due to the action of these poisonous substances on the nervous system, and if he continues to eat, exercise both mentally and physically and does not make an effort to aid nature to eliminate the poison, he is likely to develop a continued fever that resembles typhoid, especially the range of temperature, and I believe that we often call it continued malarial fever that continues after complete cinchonism is produced. Perfect rest, in every sense of the word, and a vigorous eliminative treatment will, in a week's time, cure a large majority of this kind of continued fever. It has been suggested, and I believe it is correct, that it is this fever that the Woodbridge treatment so effectually aborts, and not typhoid.

At the last meeting of the Pan-American Medical Congress so many papers were presented touching upon some form of malarial fever, its cause, prevention, duration and treatment, with so many differences of opinion in reference to all of its characteristics. So many inconsistent theories regarding the cause of the continued types, that it was evident that we have lost sight and confidence in quinine as an abortive and curative agent in this disease, and that its diagnostic value in continued fevers has not received the attention it deserves. This conclusion is not alone based upon the papers read before that Congress, but from a careful examination of the large amount of literature that has been published during the past several years touching upon the subject. Almost the entire medical profession for a hundred years, believed that quinine was a specific in malarial affections. They did not consider its diagnostic value in continued fevers, for they also believed that it would, in a certain per cent. of cases, abort typhoid fever. Since we have almost unanimously united in the belief that it does not effect or influence the typhoid bacillus, or any of the pathological processes accompanying the fever for which this germ is responsible, it seems to me, that it has a diagnostic value that has not been fully appreciated.

Loomis' and Thompson's new system of medicine, the first volume of which was published a month or so ago, says: When it is impossible to obtain the aid of the microscope in the diagnosis of malarial fever, it may be definitely made by the therapeutic test, for no malarial fever now known resist good doses of quinine for more than three or four days. That it is generally safe to say that if the process be malarial the temperature will be practically normal by the fourth day. Further it says, if quinine fails to influence the fever we may rest assured that the process is non-malarial. The therapeutic test here referred to is very important and should be constantly kept in mind, especially if we do not resort to the aid of the microscope when we are making our diagnosis in continued fevers.

I have advocated the importance of the therapeutic test here referred to for ten years, and even now, when the microscope can so easily be resorted to, and our diagnosis made without any question of doubt, still this test is indispensable, for many of us have not the instrument necessary, or have not been specially trained in microscopy to fully realize all of its advantages.

My position, as I have already indicated, is that whenever quinine is properly administered, and a sufficient quantity absorbed, it will destroy the malarial parasite in all of its forms and conditions. We have an abundance of proof to substantiate this statement.

In a private letter, bearing upon this subject, Dr, Robert Bartholow says: I have made numerous experimental investigations of the kiud you mention in your letter, and it is clear in my mind that quinine has the power to inhibit or destroy the malarial organism in all its forms, and as a result of its administration this parasite and its various modifications are acted on in close approximation to the amount of the drug given.

Dr. Tyson, of Philadelphia, says: In reply to your letter, I am confident that quinine is directly destructive to the organism which is now held responsible for malaria, and that the drug is equally effective in all its manifestations.

Dr. H. C. Wood says: I would expect malarial parasites to be killed by quinine if the blood contained a sufficient amount of the drug, one to twenty thousand, I believe, is the saturation required.

Dr. Da Costa says: I know, however, that small doses of quinine may not eradicate the malarial organism, while large doses certainly will.

I could continue to quote, if necessary, as many as thirty more communications that I have received from men eminent in the profession, from all over the English speaking world, who believe, without a single excep-

tion, that there is no condition of the malarial parasite, no stage of its development, or any of its forms, that can resist the action of the cinchona alkaloids.

I have, myself, made a good many microscopical examinations of the blood of malarial subjects, studying especially the behavior of the crescentic, ameboid and ring shaped bodies, which Loveran contends are the forms of the parasite that are responsible for the continued types of malaria, especially our Œstivo-Autumnal fevers, and I find that they are but slightly influenced by ordinary doses of quinine, if it is given as it usually is, while the patient has a temperature of over 102 degrees. But if we produce distinct, well-marked intermissions of the fever artificially by giving sufficient doses of antipyrin, antifebrin, or phenacetine, the effects of the quinine on the parasite is entirely different; it is acted on and destroyed as quickly as the spherical bodies that are found in an ordinary attack of intermittent fever.

This peculiar action of quinine on the malarial poison has a tendency to confirm a belief that I have for a long time entertained, that the drug is very imperfectly digested and absorbed when administered in any condition when the temperature is over 102 degrees. The belief, to some extent, prevails that any form of the parasite that inhabits the blood cell is not acted on by quinine. There is no doubt in my mind that these conclusions are not erroneour. Besides my own observations I have been able to collect the opinions of thirty-two authors touching upon this point, and twenty-eight out of the thirty-two believe that the endo-globular or intra-corpuscular forms are not, on this account, the cause of an uncontrolable fever, and that its proximity to the blood cell does not, in any way, protect it from the action of quinine.

It is generally admitted that the experiments which have led to the belief that one grain of quinine will destroy the malarial germs in two and a half pounds of blood, which have been taken from a patient suffering with malaria, is correct. Further, it has been demonstrated repeatedly, and it is now considered an established fact, that the parasite under consideration leaves the blood of patients, suffering with malaria, in a close approximation to the amount of quinine given. These experiments, demonstrations and facts, suggest that when our efiorts to abort a continued malarial fever are unsuccessful, that we have a complication in our case to deal with, that quinine does not effect, or our patient has failed to assimilate the proper amount of medicine.

I am convinced that the latter is indeed a very common cause of our failures. Whenever we take into consideration the various physical, physiological and pathological conditions that influence every stage of digestion and assimilation, both in health and disease, we can see how little we can depend upon the therapeutics of a drug when given by the stomach, and its action, to a great extent, dependent upon the liver, the organ, the functions of which are conceded to be the first crippled by malarial poison. These facts should impress upon our minds the importance of not relying upon any one method in the administration of quinine. Probably the most unreliable way to administer the drug is by pill form, in the way they are usually made. They have often been prepared for several years, and are as hard and indigestible as a rock. The drug is nearly always prescribed in capsules. This method is fairly reliable, but if we have any reason to believe that it is imperfectly absorbed, we should administer it in the form of a solution, either the sulphate or bi-sulphate, first by the stomach, then by the rectum, and it is often necessary to inject the bi-sulphate solution hypodermically. Experimental observations show that when it is administered in this way it only requires one-fifth as much as when given by the stomach.

We have an accurate knowledge of how much quinine is necessary, where it is injected directly into the blood, to destroy the plasmodia of malaria, but we have no way to ascertain, in a particular case, when the usual methods of administration has been adopted, when this necessary quantity has been reached, except by the results. Therefore it is necessary for this alone to govern us in determining the size of the dose we recommend.

DISCUSSION.

Dr. Sikes:—I do not wish to try to say anything to refute Dr. Register's idea of quinine on these cases, because I have never seen a case of malarial fever. I have some doubts about being able to make a diagnosis since malaria has got so common. Up and down the swamps in my country, where almost all the people practice medicine upon themselves, I find that an entire reliance upon quinine does not meet the demands of the case. I am glad that Dr. Register is a long way from where I practice, for he would interfere with my business. A great many people treat themselves with quinine, some largely and some not so much. I believe that Dr. Register is correct as to the effect quinine has upon this disease, but there is evidence that if the germ is destroyed, it

only takes six or eight days for the trouble to return. I have seen numbers of cases where people treat themselves, and not always themselves, but where they have been treated by quinine by those in the profession, that got over the primary attack and "up and about" as they say, and in from six to ten days the trouble returns again. I have seen that, in localities where you have less malaria, it is less easy for it to recur. But I have had some cases under my care that I have kept on quinine all along in combination with other drugs, and still they will recur within thirty days all the whole year through. My notion is that while quinine may be a potent factor in the treatment of this poison, unless we use a little arsenic and a little iron to build up the patient, we will have a recurrence of this trouble. That has been my experience.

Dr. Royster.—I may say on the whole that I agree heartily with the ideas expressed in Dr. Register's paper. I believe in quinine as a specific for malaria. I believe in the importance of the examination of the blood in the diagnosis of malaria. I believe in the proper method outlined by Dr. Register for administration. The only point about which I feel disposed to differ is on the question whether quinine is a therapeutic test for malaria, and whether we ought to depend wholly upon that as a test. In a paper I read a year ago for the annual discussion before the Society, I expressed the opinion that a great many fevers in which quinine was administered would get well regardless of the administration of that remedy. We all know the influence of quinine in septic fevers. We know that simple continued fevers may get well under quinine, but I take the ground that it is not an absolute therapeutic test for malaria. I want to say that I believe it to be unjustifiable and unnecessary to administer quinine unless you are absolutely certain that it is malaria. I mean quinine in antiperiodic doses. I know that a great many practitioners disagree. For instance, if a physician saw a man for the first time and was not sure what kind of fever he had, he would immediately begin giving him quinine; if he gets restless and nervous and does not improve, then it is typnoid fever; if the fever goes down, it is malaria. I take it that this is unscientific and unjustifiable. I am sure I would not like for a doctor to give me quinine unless I was sure I had malarial fever. I want to call attention to the fact that the only absolutely certain method of diagnosis in malarial fever is the finding of the plasmodium of malaria in the blood of the patient. I want to reiterate that I believe in the specific action of quinine in malarial fever. I believe it cures it- I don't believe in quinine as a therapeutical clinical test. Before I sit down I want to concur heartily in Dr. Register's remarks on the administration of quinine. I am satisfied that in our State and all over the world quinine has been given recklessly and injudiciously in malarial fever. The custom formerly was when the patient had a chill to begin early in the morning and give ten grains of quinine every two hours up to the time of the chill, thinking by that means to break it up, as it is called. I think this treatment is not only worthless, but absolutely to be condemned. I may be wrong, and some of the older heads may prove that I am. The quinine has not dissolved in the stomach and has not entered the blood in such a short space of time. I do not believe in the method of trying to get a certain amount of quinine into a patient before the time of the chill. The method which I have followed, which is not original with me at all, is one which is coming generally into vogue, and is being used in the Johns Hopkins Hospital altogether. It is to administer to every adult from three to five grains of quinine in solution or in capsules every four hours, regardless of the time of the chill, height of the fever, or anything else, giving acids if necessarg to promote the absorption of the quinine. Give to a child from one to three grains with the same interval between the doses.

Dr. Crowell.—I remember Dr. Royster's paper a year ago. I have done no special work on that line since that time, but I am of the opinion that there is no continued fever, unless it is for a day or two, other than typhoid or malarial. If you fail to find plasmodium of malaria in the blood, and if you will try the serum test for typhoid fever, you will find that it is typhoid fever.

Dr, O'Hagan:—At the risk of making myself troublerome I would like to say a few words in reply to my young frieud over there. Before I do so, I wish to say, that I perfectly endorse the views Dr. Register has taken in his paper. I have been dealing with malarial fever for half a century, and being a liberal minded man, I sometimes use pretty liberal doses, but at no time in my life have I ever attacked my unfortunate patients with ten grains of quinine every two hours. I can generally bring about chinconism without knocking them senseless every day in the week as I certainly would do with ten grains of quinine every two hours. I do not know what kind of nerves the people of Wake county have,but I think if they were subjected to that treatment Dr. Murphy would have a good many

visitors up in his establishment from that county. There is a right way and a wrong way of giving quinine. If you give it right you will get therapeutic results. I very often give it in the form of a solution. You will get better results from it given in this way and with some acid, generally dilute sulphuric acid. You can make it partially palatable, but where I can have control of my patients, I generally give it just so, at the decline of the fever fifteen grains. It seems to have a better effect on the plasmodium in small doses, especially in the dry form. It is much more readily absorbed in the stomach when desolved in acid, and consequently requires smaller doses. That the use of it is obvious.

We get the best results if it is given in the proper manner. I will not enter into a discussion as to the number of fevers which prevail here in this State. I only know that where we live we always have it and always will have it, winter and summer, and we have typhoid fever too, and these scientific methods here are making reliable scientific diagnoses absoiute and certain, I am not scientific enough to use these instruments and as to the microscope I am in a state of childish ignorance. I know one when I see it, but as to the use of it I know nothing at all, neither do I understand anything of bacteriology, I am sorry to say. I learn from the younger members because in my day these things were not known. I have stood by bed-sides, and have picked up a little clinical experience and I still hold that although I would not begin to swear by my diagnosis in malarial or typhoid fever, I arrive at very satisfactory results. I find that quinine properly given will destroy the plasmodium, and when it does not do it, I expect it is the other; however I cannot allow my old friend quinine to be abused in my presence without defending it. My friend, Dr. Sikes, claims that the laity have taken the practice into their own hands. It has got to be done. We could not live unless we did, and the people do it veay successfully too. There is a right way and a wrong way to give quinine, and if not properly presented to the body, stomach, bowels and liver you will not get good results. I say there is no greater blessing to the people in the world than quinine properly given, I think Dr. Register's paper was a very timely one.

Dr. Royster :—When you rely upon quinine as an antipyretic, do you administer it in large doses when the fever is up to 103 or 106?

O'Hagan :—I must say that I do not, Ellison, of Alabama, 50 years ago contended that quinine could be given in the highest stages of pyrexia and in continued doses.

Dr. Duffy :—In this connnction perhaps it would be well to refer to the preparation of quinine, which so far as I have seen is only put up by Sharp and Dohme—bimuriate of quinine. I refer to it on account of its remarkable solubility for hyperdermic use. That has sometimes served me when nothing else could. I have been called to patients who were comatose and having convulsions from malarial disease, so that I could not administer anything at all by the stomach. Six grains of that—it is put up in three grain tablets—may be dissolved in twenty minims of water. I have used it hypodermically without any abscess. I had the misfortune to get one last year, the first I ever got. Before that I thought it was well nigh proof. It seems to me rather optimistic to expect the eradication of malarial germs by a few doses of quinine. I think this year I had at least three cases of malarial neuralgia with pain over one brow coming on at a certain hour of the day, the most violent neuralgic pain, which I could attribute to nothing but malaria. The periodicity would seem to indicate it, and in these cases I have given quinine early, and the pain would come on early, no fever but periodical neuralgia. I have known Warburg's tincture to stop it after quinine had failed to serve me.

Question arked. "Have you ever given soda?"

Not in Neuralgic cases that I remember. In a case where the pain came on periodically at a certain hour, in a place where malaria is common and where malarial fevers are, it is very suggestive of that, especially where Warburg's tincture cured it.

Royster :—I want to insist that Dr. Duffy has no absolute assurance that that was malaria, as there are forty drugs in Warburg's tincture and among them arsenic. Anybody could take exception and say that it was not. I want to ask Dr. O'Hagan the right and wrong way of giving quinine. I would like to know the method of administering it.

Dr. O'Hagan.—I do not profess to say that mine is by far the best and most correct way of giving quinine, but it simply suits me. I want to say something about periodic neuralgia. All periodic diseases have a certain cycle to run and are controllable to a greater or less degree by quinine. I have known them time and time again to be modified when the paroxysm comes on by a dose of quinine, 20 grains. Periodic neuralgia, or sun pain, as it is called, because it usually begins with the rise of the sun, is helped that way, and in periodic neuralgia you will get good results from the use of quinine.

Now, Dr. Royster, I cannot confine myself to any one method of giving quinine. If I had a good substantial stomach to deal with I would give it to him in solution. Sulphuric acid might add something, and it would make it less bitter. If it was a baby, I would put the quinine in some kind of syrup, for with children you have to make the dose as palatable as possible, and it is a hard thing to make palatable. It is almost impossible to administer it hypodermically to children and infants. Even a puncture of the needle, unless it is very aseptic, may cause an abscess, but it can be given epidermically. Take the epidermis off the skin and put the quinine there and it will be absorbed readily. I have no fixed method of giving quinine; I give it according to the case. Some stomachs are exceedingly sensitive, and others take it readily. Give it in any form, and you will have good results.

Dr. Burroughs.—I would like to say something about Dr. Duffy's idea in regard to periodical pains, speaking of it as accompanying malaria. I come from a section of the country where we do not have malarial fever. I have never seen a case of it in the mountains. We have had some cases coming up from South Carolina and from the eastern part of this State, yet among the mountains I have seen this supra-orbital pain that he speaks of. It comes on at a certain time each day, and in regard to the treatment, I will say that quinine has no influence on it. A small dose of morphine, given hypodermically, will relieve it, but it will come back again after a time. I find nothing to serve me so well as hypodermic injection of nitrate of strychnine given twice a day in doses of one-sixteenth grain, and increased gradually to twice that much, will gradually ease the pain and it will disappear in a little while. Keep up the treatment for a week or ten days after and you will have it no more.

Dr. Flippin.—In connection with the supra-orbital pains, I will say that I was raised in a section of country where we do not have any malaria, and I never saw a case except in the eastern part of the State. The people call this sun pain. I have received a great deal of good results from the use of salyclate of soda. I give big doses of it, from 20 to 30 grains, and it has always broken it up for me. I have never gotten much results from the use of quinine.

Dr. Robinson, of Virginia.—*Gentlemen:* I did not have the pleasure of hearing the paper, as I came in late. It seems to me that the ground has been pretty well covered, and certainly we have a variety of remedies sufficient to cure almost any disease of supra-orbital neuralgia. I hardly know how to discuss the paper, as I didn't hear it. It impresses me both theoretically and practically that quinine ought to break up these fevers, and as Dr. O'Hagan says, properly administered, it does. I think we very often overlook the fact that we have other factors at play which interfere with the proper administration and the effects of the quinine. Often we have a condition of the alimentary canal which materially interferes with the effects. Not only after you relieve it from the fermentation of its contents, but which we have by improper nutrition. I am satisfied that the proper administration of elementive remedies, and then the administration of quinine in all true malarial conditions, we can eradicate it in a short time, and when we do not we have something else in the system at the time.

Microscopy and Pathology.†

By J. W. White M. D., Wilksboro, N. C.

Mr. President and Gentlemen of the Society:—In the preparation of this report on the Section "Pathology and Microscopy." I have endeavored to collect and compile from the writings of leading authorities on this subject, such reports as will be of greatest interest to us as physicians. The laborers in this field of our work have been diligent in their search, and the new lights turned on in the past twelve months have disentangled many perlexing difficulties. The detection and positive identification of the specific pathogenic micro organisms which are responsible for the many contageous and infectious diseases, have engaged the attention of pothogenists and bacterologists in all parts of the world. We rejoice to say that in many cases their efforts have met with success far beyond our most sanguine expectations. With the aid of the microscope and various staining processes, many of the organisms may be detected and accurately described. In the last few years the efforts to isolate the cholera vibrion, the bacillus of the bubonic plague and that of yellow fever have attracted wide spread interest and it is now claimed that the etiological factors in all these diseases have been discovered, and fully described. It seems not to be disputed that Dr. Ginsippe Samarilee, a native of Arezzo, Italy has discovered the microbes of yellow fever. Samarilee himself says that "the microbes of yellow fever splendidly presents and is the strongest of the microbes that are known." As soon as this discovery was

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made he went to work in the preparation of a serum for its treatment, and has inoculated over 2000 animals himself. From this extensive work the results were highly encouraging?

The successful efforts of scientists to elucidate some more simple method for the detection of the typhoid fever bacillus and the discovery of the inability of blood or blood serum, from typhoid fever cases upon these typhoid bacilli have attracted the special attention of clinicians. And have given them abundant reason to believe that we are on the eve of the consummation of these processes; when with them a perfect diagnosis of typhoid fever may be made in the earliest stages of the disease, as well as a successful means of prophylaxis through its immunizing serum. The micro organism causing the affection known as typhoid fever, was discovered by Eberth in the year 1880 and has since been known as Eberth's Bacillus. Under ordinary circumstances the bacillus is small, short and flagelltaed with rounded ends. But its age and enviroment seems to possess wonderful power over its development as the following statement will show.

It is never bound in chains, except when grown on potato culturs, but when so grown this arrangement is common. Thoinoo and Masselin have shown that when grown on bouillon the organism is slender. In milk it is large. On potato or agar it is very thick and short. In all gelatine cultures it grows very long flagella. The germs are very actively motile due probably to the long filaments with which they are provided. This bacillus may be found in water, air, soiled clothing, milk, dust, sewerage, urine, blood, etc. Cold has no effect on the organism, several times freezing and thawing leave the germ virile, and capable of setting up its pathogenic work. Sternberg puts the thermal death line at 60 deg. C. The organism is both parasitic and saprophytic, and consequently finds a suitable home under many different conditions of surroundings, better than the majority of pathogenic germs. The bacillus will retain its vitality in 1 to 2 per cent. solutions of carbolic acid. This was once thought to be characteristic of this micro organism, but recently it has been discovered that some others share with it in this propensity. Sternberg also claims that the germ retains its vitality nearly six months when buried in the superficial layers of the soil. McFarland says this organism, and especially its flagelli stain well by the ordinary means, but lose their color entirely when stained by Granis Method. McFarland further states that if these organisms are to be stained, the best method is to "allow the tissue to remain in Lofflers alkaline methyline blue from fifteen minutes to twenty-four hours, then wash in water, dehydrate rapidly in alcohol, clear up in Xylol, and amount in Canada Balsam."

Loesner has laid down ten characteristics to which the test must conform, in order to be positively identified as typhoid bacilli. They are the following:

1. The appearance of superficial colonies in gelatine plates.
2. Very active motility.
3. The large number of flagella, originating from all parts of the bacilli,
4. Discoloration by Grams method of staining.
5. Growth on media containing grape, milk and cane sugar without gas formation.
6. Growth on milk without causing its coagulation.
7. Growth in protein containing media, without generation of indol.
8. Production of acid when grown in whey, but not in excess of 3% as tested by one tenth normal soda solution.
9. Growth on potato.
10. The failure to grow in Masseus normal solution with glycerine.

The chief difficulty in the ready detection of the typhoid bacillus seems to arise from the fact that there are typhoid like bacilli. According to Fluffi no less than fifteen in number, and he indicates the strong probability of many others under the name of "Bacillus pseudo typhoidus" which have not been definitly isolated. According to Germano and Maurea no less than thirty have been found. Some of which the bacilus coli communis and bacilllus zoecalis alkalignius, are constant inhabitants of the intestine. All of which at times respond to the various tests for the typhoid bacilli. Growing in the same manner on the different culture media, clouding bouillon in the same manner; being in the same shape; often having flagella, and sometimes motile; and appearing in so many ways like the typhoid bacilli, that many claim them to be identical. No symptoms running a typhoid course have been produced from inoculations in the lower animals, with these bacilli. This disease seems to be communicated to the lower animals with difficulty. It has been conclusively shown that if fecal matters containing the bacilli or even if the pure culture be mixed with the food and animals so fed for a considerable time the animals remain unaffected.

In man I believe only dead cultures have been inoculated. No typical symptoms of

typhoid fever were given in no typical course.

At the autopsy, so say Chautemese and Widal, a sero fibrous, or sero purulent peritonitis is observed, sometimes hemorrhagic. All of the abdominal viscera, spleen enlarged, blackish and often hemorhagic. In cases which are prolonged the liver is discolored. So it seems that we have many discrepencies in the reports as to the result of these inoculations. And as the bacterial analysis is necessarily a long and tedious one, we are driven for the present at least to look to other sources for the ready recognition of this micro organism. Many efforts have been made to produce a culture medium in which only the typhoid bacilli would grow, or in which the growth of this bacillus would be so characteristic as would leave no doubt as to its identity. Many such media have been introduced, and at first with very promising futures. But the one most recently brought forward and giving brighter promises than all that have preceeded is Elsners acid potato gelatine, which is prepared by adding gelatine to infusion of potato. This is boiled and reduced to acidity. To this is added 1 per cent. of potassum iodide. This medium supports the growth of only two other bacilli, the bacillus coli communis, and bacillus zecalis alkaligines. "The bacillus coli grew prolifically, and had the same appearance as when grown on acid media. The typhoid bacilli also grew but could be readily distinguished often twenty-four hours. With low power it was scarcely distinguishable. The bacillus zecalis alkaligines is distinguished by having alkaline products, while the typhoid bacillus is an acid producer. Other bacilli never developed in this media to any extent. Elsner was able to detect fifteen cases of typhoid fever out of seventeen examinations.

But like this bacterial analysis, we cannot wholly rely upon this method of examination. So we turn with still more hope the discovery of Pfeiffer, Gruber, Durham and Widal that the blood of typhoid fever cases has a peculiar inhibitory action upon the typhoid bacilli. And that if this blood or blood serum, be injected in small but increasing doses, into man or animals an immunity is produced in the individual against typhoid fever.

Fatal doses of bacteria, if injected into other animals will produce no symptoms injected into animals thus immunized.

If blood taken from a case of typhoid fever, or from an individual immunized against this disease be mixed with typhoid bacillus culture and injected into the peritioneal cavity of a more immunized animal the animal remains unaffected. So then Pfeiffer's test consist in the mixture of the suspected typhoid bacillus culture with a small quantity of serum attained from an artificially immunized animal, thus injecting the mixture into the peritoneal cavity of a guinea-pig. If the suspected culture is the typhoid bacillus culture, it will have been made inocuous by the toxic power of the serum, and no pathogenic effect will be produced. But if the germ be another species the toxin will have no power, and the effect produced will be charrcteristic of the species. This has been found to be a valuable means of diagnosis, but for the fact that it always requires the serum from an artificially immunized animal and a long and tedious process is necessary to obtain this.

As soon as Pfeiffer demonstrated this power of serum over the bacilli, Widal set to work to make the diagnosis and so great was his success that we now know it as "Widals serum test." This consists in taking one part of serum from a suspected case of typhoid fever, and mixing it with ten parts of typhoid bacillus culture. Such a culture is naturally cloudy from the diffusion through it of bacilli; but an addition of the serum to the culture, the bacilli are soon thrown down. The solution clears away, and remains clear, while the bacilli are thrown down in whole lumps, or flocules. The bacilli are aggluntinated, swollen and entirely motionless, and soon undergo solution in many cases. Widal experimented in the following way. He took several bouillon tubes and inoculated some with typhoid bacilli alone, and the other tubes he inoculated with other species of bacilli. He then added to each tube a few drops of serum from an immunized animal, and set the tube away in an incubator at a tempeaature of 35 deg. C. In four or five hours the tubes containing the non-typhoid bacilli became somewhat cloudy; but the ones containing the typhoid bacilli were perfectly clear. At the end of twenty four hours the non-typhoid tubes became intensely cloudy, but the others remained clear. This test has often been made with various species of bacilli, with almost the same result in every case. It is true that some of the allied species have in a few instances given this reaction, especially the bacillus coli communis. Achord and Bensande found that prolonged exposure to a temperature of 60 deg. C., did not affect the reaction, but that it was considerably diminished at 100 deg. C. and was lost, entirely after boiling for fifteen minutes.

To obtain the serum, the method employed is to asepticise the end of the finger, ear,

or elbow, then make a small puncture, receive the blood and allow it to clot. Then decant the serum from the clot, and let it drop to the culture. If the serum is taken from a case of typhoid fever, the reaction begins at once; but if on the contrary, it is taken from individuals in health, or from persons suffering from other diseases than typhoid fever, the reaction will not occur. That this reaction does occur, and in the manner and way described, is admitted by all but at what time in the course of the disease this agglutinating property appears in the blood in sufficient quality to produce the reaction, is by no means settled. By some it is claimed to have been found to exist in such quantity, as early as the second day of the disease. If this can be found by further trial to be reliable, Widals serum test will be of very great practical value in the diagnosis of typhoid fever. But on the other hand, if it is found not to appear in such quantity until the fourth or fifth day its value will be greatly diminished,

From what can now be ascertained, the preponderance of testimony is in favor of its not being found earlier than the sixt day, and by this time usually the symptoms of this disease have so fully developed that a diagnosis may be made.

Biggs and Pook of New York report 422 analysis made by Widal, Achord, Johnston and others, and make the numbers of successes 95% on the first examination.

DISCUSSION.

Dr. Anderson moved that the privileges of the floor be extended to Dr. Massey, and that he be asked to talk on this subject. Dr. Massey said, I am very grateful to my friend and to the Society for the courtesy, and I am sure I appreciate being with you in North Carolina, as my own State of Virginia has always held a high regard for you.

In regard to the paper, the Doctor has made it so very exhaustive that there's really not a great deal to say, unless one has done special work.

The microscope has come into use within the last ten or fifteen years and has been the means as you know of aiding surgery and medicine more than any other one thing. The fact that when a man gets up to read a paper now, unless he goes into microscopic work his paper does not have the same amount of interest that it otherwise would have, goes to show it. They regard it as doing fundamental work, consequently our schools and colleges have established separate chairs for the teaching of this microscopic work, and the young men as they come up now are much better equipped than they have been heretofore. I do not know that your medical board has a separate chair, but the Virginia Board has established a separate chair of Histology, Pathology and Bacteriology. I do not know, gentlemen, that I can add anything to this paper as I have done no special work on typhoid fever in particular. I have along some other lines, but I have not done any special work recently on typhoid fever, and I do not think I can add anything to this excellent paper, which the Doctor has so thoroughly discussed.

Dr. Long.—If I am correctly informed, microscopic work is connected with our present examining board now.

Dr. Duffy.—In that paper there is a very useful thought that of the influence of the typhoid serum upon the typhoid bacillus. It puts me to thinking somehow or other, that the serum is liberated by the typhoid process. Heat is of course one of the factors, now in our treatment of typhoid fever when we give the cold tar preparation for instance. Is it not possible that we make some impression on the blood to manufacture the typhoid bacilli that we prevent the self-destruction of disease, I merely throw it out; it may be that in our efforts to cure we hinder the destruction of the typhoid bacilli.

Dr. O'Hagan.—I suppose he means to say that fever instead of being a destructive process is really a method of liberating and expelling these toxins of the body so that often in treating the body we hinder it, then therefore, these febrifuges as a natural consequence ought to be discountenanced as they are laid aside by all intelligent Doctors. Therefore as fever is regarded now as a beneficient agent in the cure of disease, so far from representing it, they ought to encourage it as much as possible.

Dr. Duffy.—I want to say that I am about like the man engaged in a bear fight. He asked the Lord if he could not be on his side, to please not be on the bear's side. I would not want to encourage a process to make a man any hotter, but I don't see how we will ever arrive at that without some experimentation and observation from the work of the microscope, which is now being done. It does seem to me that as far as antitoxine is concerned it is a destroying process. Virus under certain conditions destroys the specific bacillus which produced it. Now some way a man becomes inoculated with typhoid baccillus and if he is strong and does not get some lesion he gets well. It necessarily follows that something beyond anything we can do for him destroys that specific baccillus. Now, we are taught by the microscope and by the chemists that this typhoid serum does this, taken from

another patient and applied to a culture, precipitates this baccilli. I think, while of course I have nothing to offer practically, but merely to suggest that it may be the continuous application of which the chief features are antipyrine, ascetanilide and things of that kind, have no power except to keep the temperature below a certain point, may prevent the liberation of that very serum which destroys the specific element of disease.

Dr. Register.—I would like to ask the doctor if the cold water bath would have the same effect on the patient. It seems to me the process would be exactly the same if there is any element present of the kind you mention.

Dr. Duffy.—In answer I would say by no means. In the first place, the water does cool the patient. If it is conceded that the main object in applying cold water is to cool the patient—it is the effect upon his nervous system. Still, ought we to cool him and should that be the only object? We do not introduce something into his blood which produces chemical changes and reduces the temperature. We do it either by the nerve center by the effect of cold on the nerves, or by cooling him as we would cool a piece of iron, not chemically.

Dr. Long.—I do not know very much of this microscopic work, I am sorry to say. Dr. Register's remarks suggested to me to inquire what method Dr. Duffy refers to in applying that water, whether he means the treatment emphasized by Dr. Wilson, or whether he proposed the method of running it through the alimentary tract,as it seems to be a widespread treatment, that of drinking water every fifteen minutes.

Dr. Register.—Dr. Duffy suggested that cooling the fever to a certain point might prolong the fever. I ask if reducing the fever with cold water would not have the same tendency to prolong the fever as cooling with drugs.

Dr. O'Hagan.—I believe that the cold bath is universally admitted to be a great benefactor, and that in applying it to the body, it is not for the therapeutic effect, but the tonic effect on the nervous system. The danger of using culture preparations has been pointed out years and years ago. I believe that the danger consists chiefly in metabolism—in disease metamorphosis—thereby producing organic disease, and the more advanced physicians have now discounted culture preparations as of any value in the treatment of febrile diseases. Still, we may speculate on the results that are going on in the chemical laboratory of the human body, we can only arrive at that conclusion—we are still a long ways off. We all know this, that the labors of Pasteur—the greatest of all great men in his particular department—have proved of value in these antitoxic serums. In the production of that serum, we are entirely unable to explain the vital process going on. We know this, that the serum has been attended with very beneficial results. We have not been able to diminish the mortality more than one-half, but I believe that the time is not far off when the serum treatment will be applicable to quite a number of diseases. I don't know whether we ought to trouble ourselves, but be content with the effects of the serum in its infancy. I think we can use the cold water even at the risk of lowering the temperature, because that does not effect the destruction of the constructive metabolism. I can only say then that I was very much interested in the doctor's paper. I am perfectly willing to confess my ignorance, still I bow my head to those who do know something about it and are instructing the older men.

Dr. Poole.—I have been using Ehrlichs test for the diagnosis of typhoid fever through the urine, for four years, and it has not failed me in the four years. Diagnosis by the microscope is very nice and very true, but, as is known, not everybody has a microscope, and not every one is capable of using one if he has it. This diagnosis by Ehrlich's test, as you know, consists of applying a strong solution of sulphuric acid to an equal amount of urine, and to that add a weak solution of nitrate of sodium, agitate it and add a few drops of aqua ammonia. When this is done the reaction comes at once. If we have typhoid fever, the reaction is that it must become a blood-red color. The only objection that might be raised is that several other diseases will react just as typhoid fever. Fortunately they are such diseases as any practitioner ought to be able to differentiate between without any test, such as inflammatory rheumatism and several others. I might add that the test must be applied between the fourth and fourteenth day.

When to Operate,†

By J. C. Rodman, M. D., Washington, N. C.

The "When to Operate" in contra-distinction to the "How to Operate," or what to operate upon, shall be the subject of my remarks, and let me assure you gentlemen that it is no easy matter, with the necessarily limited experience of a country physician, to so elucidate these facts and theories,

†Read before the North Carolina Medical Society at Morehead City, June 9th, 1897.

that it will be to you improving as well as interesting.

I shall begin with the following hypothesis, that it is just as important, if not more so, in the majority of instances to know "when to operate," as it is to know "how to operate." Though the greater number of our text books assume the case to be one in which only an operation is admissible, then teach us the technique, the mechanical part, and how to avoid the Scyllæ and Charybdis of our perilous course; yet fail to emphasize with the same care, the equal important question of "when to operate." This question of "how to operate" admittedly is necessary and proper as a requisite to our career as successful surgeons. But in the interest of our patients and our own reputation it behooves us at the same time to prepare for that all important step of "when to operate," for the time WHEN must be fixed in all operations of election before operative measures begin. And most frequently the correct answer to the question when? means a life saved or much pain. That point of time when taken into due consideration has saved many a woman from months of agony and an untimely end in mammary cancer. In this disease, "time when operated upon," controls the prognosis. It is comparatively a simple matter to amputate a breast, though, I must confess, that in no disease is the old maxim more appropriate, "what is worth doing at all is worth doing well" and thoroughly. Though the earlier an operation is performed in this disease, the less is this of vital importance, and *vice versa*.

I am happy to say that there are very few physicians, in this enlightened surgical age, that do not, in this disease, advise an early operation and do a thorough one. That there are some who are tardy in this respect is to be deplored.

To what degree, "time when operated upon," controls the prognosis in mammary cancer is as clearly shown in an article by Professor Frederick S. Dennis, before the American Surgical Association some years ago, as in any literature I can find. Not only is this true of mammary cancer, but of uterine cancer and all other operable malignant neoplasms. We can readily see that if the inaccessible glands are involved, and the cells of the growth are scattered in inoperable regions, that no matter how beautifully and skillfully the operation may be performed, it is all for naught, or at best only of temporary benefit. While, to the contrary, if it is performed at the proper time, viz.: in the incipiency of its growth, even if the technique is faulty, and the operator not so skillful, we give our patients a good fighting chance for life and health.

In appendicitis "the when to operate," if at all, is the absorbing question, before which medical treatment, manner of surgical treatment, etc., descend to a secondary place. Certain of our leading lights in the surgical world have said "the when to operate" should be governed mainly by pulse, some by pain and tenderness, and others by temperature, and still there are others who, viewing the field with a broader and more extended vision, have not attempted to formulate any set or fixed rules by which an operation shall, or shall not, be performed in every case of appendicitis; but rather do they, and it is with this latter class that I most heartily agree, decide by the clinical phenomena presented in each individual case taken in toto. We see cases that die with and without operative treatment; cases that recover with, when they would have recovered without operation; instances of abscess or gangrenous appendix, early in which there has been a localized peritonitis and the septic germs are pocketed off, so to speak. Nature here having curtained a sleeping volcano whose rupture may take place at any time, and with it almost certain death to the patient. If operative measures are instituted early enough to forestall this outbreak, the chances are that all will be well, but the possession of such diagnostic acumen, to enable us to learn the exact condition of affairs in every case is the good fortune of but few, if any. Consequently "the when to operate," is still of the first importance and should be given the gravest consideration, for in many cases the life or death of an individual hinges upon this point of time. The fact that there have been cases in which an operation was advised by physicians, accepted by patients, and in the course of a few hours, in which preparations were being made, the patient's condition improved, and recovery took place from medicinal measures alone, tends to make us temporize and put off operative treatment from one hour to another, hoping against sometimes our better judgment, that the good fortune of some others may be ours, but such delay is fraught with danger, for at times the space of one hour is enough to convert what would have been an aseptic operative field, into a diffuse septic peritonitis, with its high mortality rate. Do not understand me to say that every case of appendicitis should be treated surgically, for cases do recover without the knife, but surgical science has saved many, while delay in operable cases has caused deaths that might have been averted, so we must believe that the "time when" is the all important point.

Some years ago in gangrene, when in

operable regions, "the when to operate" was always decided by the line of demarcation, and an amputation was deferred until nature fixed the time, but fortunately at this time we are not always so conservative. In a case of rapidly spreading gangrene, with beginning septic intoxication, it becomes a question of dire importance as to whether an amputation should be performed then or when? We know that if our patient dies, he will die from septic intoxication, due to the absorption of ptomaines, formed by the pathogenic bacilli in the gangrenous parts. It is a simple matter, a mere amputation, but when? is the question. Whether to let our patient run the gauntlet of acute septicæmia, and wait for the line of demarcation which may not come ere death take place, or to take upon ourselves the responsibility and operate then? The question becomes a serious one, as it does in all cases where the future may show that procrastination has indeed stolen our last chance of success.

This is eminently true in acute intestinal obstruction, for heeding to the cry of suffering humanity, we are often tempted to give the anodyne—opium in some form—thereby masking the real condition, and giving to the patient that sense of well being which is so open direful in its deceptions.

This disease in its incipiency, is not always so easily diagnosticated for surgical treatment, and may be mistaken for other troubles which recover without operation. Thus we often attempt to relieve by purgatives, high enemas and drugs which have a relaxing effect, and many other things which may suggest themselves to the conscientious physician, who, realizing that he may have a serious case to deal with, works long in the vain hope of alleviating without an operation; that which, owing to the surroundings and disadvantages of a country physician, he looks upon with a great deal more gravity than if it were in a modern hospital.

The conclusions that I would draw from these facts, are that there comes a time when temporizing must end and conservatism cease to be a virtue. The correct answer to the question "WHEN TO OPERATE" makes the successful surgeon the great benefactor of his fellow man and a true disciple of the Great Healer.

DISCUSSION.

DR. O'HAGAN.—I do not know that the paper admits of any discussion. When to operate is the great question of surgery, and it has been illustrated by the gentleman and fully proved that of all things in the world, procrastination is most to be guarded against when an operation is contemplated. I know that the Society is indebted to my young friend Dr. Rodman for one of the most logical papers presented on this section.

DR. HINES.—I have had the misfortune in the past 54 years to see five patients die for the want of that good judgment which Dr. Rodman advocated. I had one of my own, and knew that he ought to be operated upon, but they objected. I even found pus, and still they refused to endorse the operation, and my man died. I have heard of several who have died for the want of an operation at the proper time, and I commend the paper of Dr. Rodman to the consideration of every gentleman here. It is important to know when to operate and when not to operate.

DR. WEAVER.—The question to be, in my mind, is how to determine when to operate. It has been my good furtune to see the master of surgery in that particular operation on appendicitis operate, and he himself in one particular instance could not determine when to operate. I remember the case he had, a young gentleman of fine physique, apparently healthy, came into the hospital with pain in the iliac region, with no fever, without any nausea, slight constipation, without any rise of temperature. Precautionary measures were taken, and he was put to bed with a possible diagnosis of catarrhal appendicitis. That was early one morning, about 11 o'clock in the day. About midnight the Doctor was sent for to the hospital. The young man had had a sudden rise in temperature, a severe chill, and he then diagnosed appendicitis, brought him before the class next morning, did his admirable operation, cut down on tumor that had been lately developed, and, to the astonishment of the class, he found impacted in the appendix a brass pin, which he took out with some pus. All antiseptic measures were taken, and it was a successful operation; the young man lived, which would not possibly have been the case in the hands of a novice like myself. The point is this, that certain cases develop so suddenly that we do not know and cannot tell when to operate, and that is the great desideratum. I have never been able to know exactly where to draw the line when to operate. It has been my serious observation and practical experience to see many cases in our region die from the honest want of knowledge of when to operate. They might have been saved if we could have made a thorough diagnosis and known when to operate.

He whose life has failed to make the world better than he found it, must find it very hard to die.

Psycho-Therapeutics.

By J. B. Powers, Wake Forest, N. C

Perhaps I should begin with an apology for daring to intrude upon the motive of this convention a subject which has been rendered repulsive by its association with empiricism and charlatanry, and has, therefore, been neglected or repudiated by a multitude of skeptics both among the people at large and in the ranks of our own profession.

Nevertheless, to a body of men, assembled for the furtherance of knowledge, a solicitation to leave for a while a field of labor, occupied mainly by material agencies, to investigate another field which abounds in unseen things, existing in a state of chaos, will not appear inexpedient. Especially will such investigations prove desirable if the fact can be established that psycho-therapeutics is worthy of elevation to the level of the attention of the general medical profession.

All truth is advanced when weighed in the balances of just criticism. Every branch of knowledge bears testimony to the potency of scientific method in eliminating false assumptions and overthrowing imposing errors, prejudices, ignorance, and antagonism, however, born of unbelief without due investigation, should never dictate what should be endorsed as science. Therefore, every bias and misconception should be laid aside and the spirit of investigation encouraged that whatever of truth is in psycho-therapeutics may be advanced and established.

In the beginning acknowledgement is to be made that there is no working hypothesis universally accepted, whereby every phenomemon of psycho-therapeutics can be absorbed from all mystery and placed upon an assured scientific basis: it is further to be admitted that there is no general law, yet discovered, which embraces and interprets every class of psychic observation; but there are many theories advanced to account for the variety of authenticated facts which line up in disordered array, all of which, however, are satisfactory only when applied to one class of phenomena and partial or total failures when required to face other clases.

The domain of psycho-therapeutics, nevertheless, is not alone in preventing such an anomaly of embarrassment and obscurity during the periods of its growth. Astromony was once nothing more than a scattered mass of observations without system or intelligent method of classification, and it was lifted from the dominion of empiricism by the discovery of the Kepler Lævo. Later the promulgation of Newton's theory of gravitation stirred up a revolution in the scientific world, and astronomy advanced to its place among the exact sciences. Chemistry, also, previous to a knowledge of the atomic theory, well illustrates the slow growth and interrupted progress of other branches of science during the stages of birth and infancy. Yet chemistry has grown to be one of the pillars of our faith and an important tributary to medical science.

As astromony came from astrology and chemistry from alchemy, so in the field of psycho-therapeutics may there not be an infant branch of medical science struggling up from obscurity? And is not the way open for it to make a direct appeal to the representatives of the healing art to lift it above suspicion, take it out of the hands of empirics, and place it side by side with other curative agents?

In one form or another this infant science has played a very important part in the affairs and history of the world. But it has been met by wave after wave of opposition and been submerged again and again. Albeit it has survived all, and again out of its poverty has arisen encouraged by the spirit of progress and revolution permeating every field of thought and knocks at the door of the household of science for investigation and recognition.

The fact is plain that psycho-therapeutics is no new thing, but, perhaps, one of the oldest remedial measures of which there is any record. The name and the methods of exhibition may be new, but the principles pervading and animating it stand forth time honored and unchanged with the flight of years. In some form it seems to have girdled the earth, following the human race in all its wanderings. It flowed like a subterranean stream beneath all the civilizations of the past, and sprang up ominously here and there into fountains of influence far famed for healing the diseases of the people on the one hand and on the other celebrated for supernatural achievement according to the measure of enlightment or of superstition which surrounded its activities.

Doubtless its secret ramifications far out number and outreach its recognized manifestations. The deeds of ancient sorcerers and magicians, the mysterious oracles of the sibyls, the powers and the signs and wonders wrought by manifestation among many nations, all possibly were accomplished through allied principles which chain them together under one identical influence hav-

ing different modes of expression and different objects in view.

At different times in the hands of different individuals perhaps, the basal principles of psycho-therapeutics have been made the instrument for the accomplishment of a variety of results. It was probably this identical occult power which invested the characters of mythology with mysterious influence, and clothed Æsculapius himself with the apparent supernatural gift of healing diseases, and of allaying pain by breathing on inflamed parts, or of producing prolonged sleep by stroking with the hands. Tradition says of him that he could subdue mania and hysteria by his manifestations, and gave counsel to the sick while in a trance or dream. Neither were these influences unknown to Hippocrates. He said: "It hath often appeared while I have been soothing my patients that there were a strange property in my hands to pull and draw away from the affected parts aches and divers impurities by laying my hands upon the place, and by extending my fingers toward it."

That there is some psychic force in man, which under favorable conditions and functions of the body, and which can be applied to the alleviation of human ills, seems to be a proposition which no longer admits of reasonable doubt, and evidence is furnished by all nations to support the truth of it. In the early periods the priests and saints possessed the mysterious power of healing the sick by means of prayers and ceremonies laying on of hands and incantations, amulets and talismans, rings, relics, and images. In more recent times Saint Patrick, the Irish apostle, is said to have healed the blind by laying on his hands, and Saint Bernard to have restored the sight of eleven blind persons, and the use of the limbs to 18 lame persons in one day at Constance. Indeed the horizen of our own time has been illumined by marvelous achievements of lesser magnitude but no less mysterious and significant.

However, mental therapeutics descends to our time in schools, not in one, but many, not as one united band with a single purpose, but with divided issues and interests. They clash at different points and make war upon each other, but agree in one thing —they all claim to cure diseases, and the cures are said to be as well authenticated as any fact in history or science.

The most prominent and better known methods of healing diseases by psychical means now in vogue have been summarized as follows:

1. "Prayer and religious faith as exemplified in the cures performed by partaking of the healing waters of the famous grotto at Lourdes, and other holy shrines. To this class also belong the cures effected by prayer alone, the system being properly known in this country as the Faith Cure and the Prayer Cure."

2. "The Mind Cure,—a professed method of healing which rests upon the supposition that all diseased states of the body are due to abnormal conditions of the mind, and that the latter (and thus the former) can be cured by the directation of the mind of the healer upon the mind of the patient."

3. "Christian Science.—This method of healing rests upon the assumption of the unreality of matter. This assumed, as a major premise, it follows that our bodies are unreal, and, consequently, there is no such thing as disease, the latter existing only in the mind, which is the only real thing in existence."

4. "Spiritism, which is a system of healing based on the supposed interposition of spirits of the dead, operating directly, or indirectly through a medium, upon the patient."

5. "Mesmerism.—This includes all the systems of healing founded on the supposition that there exists in man a fluid which can be projected upon another, at the will of the operators, with the effect of healing disease by the therapeutic action of the diseased organisms."

6. "Suggestive Hypnotism.—This method of healing rests upon the law that persons in the hypnotic condition are constantly controllable by the power of suggestion, and that by this means pain is suppressed, function modified, fever calmed, secretion and excretion encouraged, etc., and thus nature, the healer, is permitted to do the work of restoration."

These several schools formulate the system of teaching and methods of treatment mainly practiced at the present day in the field of mental therapeutics; and each of these is further subdivided into seats, differing in their notions of causation, and resorting to different means of applying the principles at their command. It is not far to see that choas and empiricism are the most marked characteristics of each sect, but the scientific man cannot fail to be impressed with the conclusion that there must be some one principle running through them all and linking them together in one common system, and it is the task of scientific inquiry to reveal this principle in its widest-bearings and apply it to the benefit of medicine.

For there is one frequent fact of tremenduous importance that wonderful cures have been and are now being made through the

medium of these different systems, and the combined arguments of materialistic philosophers have not been able to overthrow the results nor give a rational explanation of their methods. Psycho-therapeutics, therefore, deserves to be taken up with an adequate measure of scientific spirit to determine its value.

Exceptional value attaches to invocations of divine aid in obtaining relief from incurable afflictions in all ages. All power to heal diseases at last amounts from the ommiscient source of creation, and when the wails of human beings are heard at the mercy seat and their petitions granted for the asking, there is additional occasion for encouragement that there is a supernatural resource beyond the ken of our healing arts.

Narrowing down to a single thread which connects all systems and sects, and which is recognized as an essential factor in every case, it is readily perceived that belief in the success and ability of the process to accomplish the proposed result is a factor common to them all: and the development of this belief is compassed by very different measures among the different seats, often not unaccompanied by surprises on account of contradictory and antagonistic procedures, sometimes rediculous for their absurdity. But they create belief in the mind of the patient, and this faith, however accomplished, is the one thing needful, and the first step and essential prerequisite to the success of psycho-therapeutics. Faith is the mental condition which opens the way for the action of the psychic influence, and the changes follow through the operation of a force which modifies the physical condition of the patient. Again boiling down the several systems to the tangible and practicable issues by discarding those of less importance, and in this way sloughing off the superfluous appendages, while something may be lost, perhaps, more is gained, there remains hypnotism and mesmerism as presenting the best field for investigation and representing approximately at least all the most important principles embraced by all the schools and seats.

It is well known that these exponents of mental therapeutics enjoyed an existence for a long period prior to this recognition under their present titles, but at length they are beginning to come forward to assume the position of honor in the front rank and have really become the nucleus around which the principles and merits of the numerous seats may crystallize. Thus the initial step toward the formation of a central point for the accretions of truth as the result of further discovery in the province of psycho-therapeutics to such deposit seems established.

By way of parenthesis, however, in order that interest may not flag and that the spirit of inquiry may be further stimulated in a subject, hitherto considered trite, as evidence of the value and potentiality of mental therapeutics to alleviate human suffering and cure diseases, it is well to state that in some parts of the world it is an every day occurrance to resort to hypnotism or mesmerism to produce anæsthesia for surgical operations, and that they are employed in obstetrics not only to mitigate the pains of labor, but also it is said to originate and prolong them at the discretion of the operator. Of greater interest still is the statement that cases treated by the aid of these measures convalesce with greater ease, wounds healing far more rapidly and hemorrhages both in obstetrics and surgery amounting to almost nothing.

Furrhermore, broader usefulness and higher degrees of advantage may result to medical science from the higher phases of development of hypnotism and mesmerism on the ground that they prove effectual in some diseases where material remedies are little more than failures. Already it is a prevalent custom in several hospitals and medical colleges in Europe and America to treat successfully such diseases as rheumatism, neuralgia, dyspepsia, bowel complaint, sick headache, torpidity of the liver, chronic bronchitis, partial paralysis, writer's cramp, and strabismus by the employment of hypnotism after unsuccessful attempts have been made with the materia medica list, in some instances. Such triumphs have already attracted wide-spread popular attention, and can scarcely fail to induce scientific men to raise the successful agents to a place in the rank of medical science. May it not be also true that homœopathy owes much of its boasted success to the exhilarated expectation of the patient and the mental conditions which surround its ministrations?

Waiving all the material points of the history of psycho-therapeutics, and omitting further reference to the less prominent systems, suffice it to say, that there are three noted schools now acting upon the principles as represented in hypnotism and mesmerism. Prof. Liebault in France, following the original researches and discoveries of the Englishman Braid, published a work in 1866 in which he advanced much new doctrine, and laid the foundation of the Nancy school of hypnotism. The theory, as supported by this school, is that the physiological conditions characteristic of

hypnotic sleep are produced by mental action alone; and that the results can be best produced in subjects of sound health and perfect mental balance; and that this action of the mind and the concomitant physical and physiological conditions are the consequence, in every case, of suggestion in some way. In fact the dictum of this school is the discovery of Prof. Liebault: "That hypnotic subjects are constantly amenable to the power of suggestion; that suggestion is the all potent factor in the production of all hypnotic phenomena." A number of learned scientists have become followers of this school, and Prof. Bernheim, the pupil of Liebault, is its able representative.

Prof. Charcot, of the Paris Salpetriere, one of the most highly esteemed and widely known of living physicians, is the distinguished founder of another school of hypnotism, known as the Paris school. This school holds to the idea that hypnotism is the result of an abnormal or diseased state of the nerves, and that many of the phenomena can be produced without suggestion in any form; and that the true type of hypnotism can only be induced in subjects whose nerves are diseased; and that the whole matter is explicable on the basis of cerebral anatomy or physiology. The fact is, during his investigation of the treatment of hysteria by means of metallic disks, Prof. Charcot rediscovered hypnotism, just a century after it had been disowned by the French Academy under the leadership of Mesmer. He made bold to announce his faith, and that was sufficient to give hypnotism a scientific standing. The great name of Charcot has attracted an able following to this school, and a variety of diseases are treated yearly at La Salpetriere.

Then, there is a third school having a vast number of scattered disciples, and a long train of charlatans and empirics, which holds to the fluidic theory of Mesmer. They believe that passes made over the subject, independent of suggestion, produce the hypnotic condition by being accompanied by an intense concentration of mind and will of the operator; that from him flows a subtle fluid which strikes the subject wherever it is directed, and produces therapeutic or other effects in compliance with the will of the operator; and that the best effects are reaped by contact; but that they can be produced at a distance and without the knowledge of the patient, and independently of suggestion.

Here again it is sufficiently obvious that conflict and antagonism reign among the schools; and here again mental therapeutics bears marks of resemblance to other branches of medical science. Eclectics, homœopaths, allopaths, and others have each in time claimed all, and discredited and disclaimed all which the other schools contended for, but the fact remained that each contained valued treasures and discovered useful knowledge, and neither possessed all power nor covered the whole field of medicine. So it is self-evident that neither of the important schools of hypnotism have compassed the sum-total of knowledge nor solved the whole problem of psycho-therapeutics, but each has contributed truth and discovered facts which have assisted in advancing mental therapeutics toward a solid basis as a science.

The phenomena and results of the hypnotic condition are so prophetic of useful attainment that scientists have sought for a physiological explanation of all the intervening steps in the whole process of psycho-therapeutics from an induction of the state to a transformation of diseased into healthy tissues; but unfortunately this phase of the subject seems to have yielded little more than conjecture. It is probable, nevertheless, that the involuntary nervous centres are influenced in an ill-understood manner and enabled to usurp control in a powerful degree, not only of the voluntary centres, but also of the entire corporal mechanism, and whether it be over the mental operations or the functions of the physical systems its force is exerted, the results are indicative of strange and unusual power; and it is to be seriously questioned, if the half that is said be true, whether of material remedies there exists an agent co-equal and co-extensive in effect and physiological power to stimulate and arouse the dynamic forces and vital energies of the organism to their highest limit to resist and overcome disease.

The hypnotic condition brings out extraordinary evidence of exaltation of power from whatever standpoint it is viewed. Thus a subject of Mr. Braid, "a man so remarkable for poverty of physical development, that he had not for many years ventured to lift a weight of 20 pounds in his ordinary state," could when hypnotized raise a half hundred weight on the last joint of his forefinger as high as his knee. So again the sensibility of the hypnotic may be excited to an extraordinary degree, and the sense of smell, for instance, become so acute as to almost equal that of the canine species. Thus a glove or ring may be taken by the subject and their owners found among a large number of persons by scenting each. The muscular sense and sense of temperature also have been developed to an enormous extent, and the feats of memory are simply marvellous. The effects on the functions and secretions may be well illus-

trated by reference to a lady who was leaving off nursing her infant on account of deficiency of milk. Mr. Braid hypnotized her and made a few passes over the right bosom. In a few moments she made signs as if the baby was nursing, "and in two minutes the breast was distended with milk." The flow of milk continued abundant from that side, and Mr. Braid was obliged to restore symmetry to her figure by subsequently producing the same change in the other breast. Such facts are much strengthened by the unqualified endorsement of so distinguished a man as Prof. Gregory, of Edinburgh.

In the same way an idea that any structural defect will be removed and the normal condition restored by a certain act will increase the organic action of the part, and the effort of nature in the hypnotic condition to obey suggestion is excited to a high degree to accomplish such a result. As it were, the idea serves as a lever which works in the cogs of a wheel turning the power of the organism forward to make a supreme effort to repair the damaged tissues which are the seat of the disease.

It is possible that the whole problem of increased power in every direction hinges upon the enhanced strength of the sympathetic nervous system and subconscious centres of the cerebro-spinal system under the influence of a dominant idea during the hypnotic condition. The advantages, therefore, to be obtained through the leverage of psycho-therapeutics may be merely an exaltation of powers which already exist, and are in daily warfare resisting and overcoming the ravages of disease; and hypnotism and mesmerism are merely convenient methods of developing the state of the involuntary nervous centres in which their superior power over the physiological processes, extending possibly to phagocytosis, serum therapy, &c., can be voluntarily increased under the peculiar stimulus at their command. However, the definite knowledge of the universal action of the sympathetic system of nerves and the unconscious nerve influence, especially the office of the trophic nerves, their intimate connection with the voluntary system, and the interlapping influence of all, over the activities of the organism, is so meagre that it is difficult to approximate the total consequence of a high degree of stimulation applied to them as a whole. Nevertheless, the office of the involuntary energies assumes a much more important relation toward the nutrition and control of the bodily functions than is usually assigned. Not only do they perform the functions of digestion and reproduction, growth and repair, secretion and excretion, &c., but also supply the store house and soil from which the later growth of intellect and spirit are reinforced. The involuntary are continuous in action, continuous in every species of animated organism; the voluntary are intermittent action, and have appeared as tentacles and tendrils from the primary stem, *prehensive* (?) of things alien to the individual, and are more marked in the higher species of animated existence. The connection between the systems is both anatomical and vital, both functional and organic. The action of the one may influence and command the services of the other. The fibres of the one intermingle and intertwine with the fibres of the other.

This intimate connection between the cerebro-spinal and the ganglionic systems of nerves offers an explanation why excitation of the one produces phenomena in those parts assigned to and controlled by the action of the other, and this influence is frequently seen in the effects of emotion and expectant attention. The thing seen or the word heard creates the emotion or expectation, and the wave of influence beginning with the voluntary nerves is wafted on to affect the involuntary centres and the organs and processes controlled by them either to depress or exalt their functions in accordance with the nature of the original impulse.

Psycho-therapeutics, therefore, begins with faith, the office of which is to prepare the patient for the reception of the treatment. Then follows the suggestion or idea which is plied by the operator with such skill as his gifts may allow. Then the idea having penetrated the mind influences the brain and voluntary nerves, and this influence spreads to the ganglion of the sympathetic nerves, and the subconscious centres, and the processes of nutrition and repair are thus linked to the suggestion to perform its bidding in obedience to the will of the manipulator. If he move this lever forwards, he stimulates the functions to overcome disease; if he turns it backwards, he depresses the vital processes or influences the energies to assist their power in some more or less striking way.

However promising and important psycho-therapeutics may be, its results may, nevertheless, seem capricious and disappointing, on account of the number and complexity of the factors which determine them. They may vary with the confidence of the operator in his own ability and in the efficacy of his method. They may vary with the attitude of mind of the subject toward it and his ability to assume the condition of passivity, or with his physical condition. They may vary with the influences and circumstances attending its administration. The

manifest presence of skeptics, and a skeptical audience, and their adverse comments may cripple its effects or dissipate its power. Moreover, the advantages of favorable conditions is decidedly apparent. Consequently there are all degrees of its manifestation both of hypnotic sleep and of its healing power, from the faintest indications of cure to resuscitation from the cataleptic condition simulating death.

The accomplishment of a given result depends on certain antecedent steps. Music may prepare the subject for the reception of the influence, and object lessons will operate to cast away apprehension of risk in the hypnotic condition, and the results may vary according to the means employed to induce the hypnotic state, which is necessary to the action of mental therapeutics. The means employed may be both physical and psychical, but generally the one reinforces the other. The physical means embrace such agencies as affect the nervous system, particularly the nerves of sensation, by superinducing a condition of fatigue or relaxation in certain centres, which produces an inhibitory effect on parts of the brain. The conscious and obviative portions surrender to the subliminal or subconscious centres.

One of the best known physical methods to induce this condition was introduced by Braid, and consisted in placing an object near to and above the eyes in such a position as to cause a continued strain upon the ocular muscles. Another method was to make pressure upon the eyelids. Many operators also made passes over certain regions of the body. The top of the head, forehead, ovarian region, root of the thumbs, and over the joints, are termed by Pitris "hyperogenic zones," because they are especially sensitive.

The representative psychical method is oral suggestion. In a word, this is mental concentration upon a fixed idea, and this idea is made to penetrate the mind, to take possession of it, and dominate the mental organization, producing the same kind of physiological condition. In the Nancy school suggestion alone is employed, and when passes are made it is only to give an air of mystery to the proceedings, and thus add potency to the suggestion. The Paris school employs Braid's method and have introduced other variations, such as flashes of an electric light into the eyes of the subject or its sudden withdrawal, striking a gong without warning close to the ears, or by some peripheral irritation, such as rubbing the scalp, &c.

The mesmerists employ passes, stroking from the head downwards, gazing fixedly into the patient's eyes, and concentrating the mind fully upon the work in hand, strongly willing the subject to sleep, &c.

It is impossible to retire the conscious mind and paralyze its influence by any of the methods used in all the schools, and faith and passivity of mind stand out as prominent factors entering into the causative of the peculiar condition which has been given the generic title of "hypnotic sleep."

The body in this condition presents three or more states.

1. The *lethargic*, in which motility is accompanied by increased reflexes and muscular contractility, sensibility by sharpened hearing, respiration by an increase in number and depth, and circulation by a distension of the peripheral vessels.

2. The *cataleptic*, in which there are complete insensibility, plastic flexibility of joints and lessened reflexes, slow and superficial respiration, and slow and contracted circulation.

3. The *somnambulistic*, which is characterized by ready obedience to suggestion, and an increased sensibility of special senses, but diminished in the skin and nervous membranes.

Absence of pain is common in all stages, but may be present or even increased in the last stage. Charcot and Richet have demonstrated that sensibility to touch and temperature is increased, often to a surprising extent.

Having secured the condition of hypnotic sleep, psycho-therapeutics accomplishes the work of healing by suggestion, often by proclaiming in a loud voice the disappearance of the symptoms, as practised by Prof. Liebault: The idea of cure is made to penetrate the hypnotized mind and the energies of the body obey the suggestion, stimulating the fluids and tissues to become resistent to the encroachments of the existing illness and to repair the lesions occasioned by it. The patient in this condition is convinced that the symptoms have disappeared, that the pain is gone, and strength and appetite are restored, but this is not all. Advantage is taken of the special psychical receptivity and cerebral docility and stronger influence is exerted through the exalted ideo-motor, ideo-sensitive, ideo-sensorial reflex centres by provoking a higher order of reflex activity, and inducing the brain to strengthen its efforts to accomplish the expected cure by transforming the accepted idea into actual reality.

It is stated by Prof. Bernheim that he has employed the suggestive method since 1882, which he saw experimented with by Liebault. He confesses to have begun to use it

timidly, and without confidence; but now it is almost daily employed in his clinic before the students and a day seldom passes in which he does not show them some functional troubles, pain, paresis, uneasiness, insomnia either moderated or instantly suppressed by this method. To illustrate, take an example from Bernheim. "A child brought in with a pain like muscular rheumatism in its arms, dating back 4 or 5 days. The arm is painful to pressure; the child cannot lift it to its head." The Professor begins by saying, "Shut your eyes, my child, and go to sleep." Then he holds his eyelids closed and continues on talking. "You are asleep, and you will keep on sleeping until you are told to wake up. You are sleeping very well, as if you were in your bed. You are perfectly well and comfortable; your arms and legs and your whole body are asleep, and you cannot move." Then he removes his fingers from the eyelids, "and they remain closed." He puts his arms up, "and they remain so." Then touching the painful arm he adds: "The pain has gone away; you have no more pain anywhere; you can move your arm without any pain, and when you wake up you will not feel any more pain. It will not come back any more." The finishing stroke to the treatment was given by suggesting a feeling of warmth and an assurance of no return of pain. Then the child was awakened from the profound hypnotic condition and remembered nothing of the transaction. He lifted his arms readily to his head, and the pain had almost completely disappeared. Next day his father reported that the pain had disappeared and the child had experienced no return of it.

While there can be little question of the efficacy of treatment by psycho-therapeutics in its less perfect forms, there are thousands of experiments in the better forms day by day which attest the value of hypnotism, and many able scientists have recognized its usefulness. By its aid the distinguished Cloquet amputated a woman's breast without pain in 1829. Esdaile employed it in 600 operations upon Hindoos with success, and it appears to be a convenient substitute for the powerful anæsthetics when circumstances weigh against their use. In medicine, functional nervous diseases yield to its influence. Hulst employed it in 422 cases with good results, and it proved of most service in diseases where pain was a prominent symptom. Dujardin-Beaumetz quotes Reynault as having cured a case of monoplegia of the leg with amenorrhœa. Enuresis is improved and frequently disappears under this treatmdnt; and claims of cures of inflammations are made by physicians of the best standing. Wetterstrand reported good results in chronic inebriety; and Wilkins, in Doua's clinic endorses the same statement, but says the suggestion must be renewed at short intervals for a time.

In the summer of 1884 there was at the *Salpetriere* a criminal lunatic who was filthy and violent, and had a long history of impurity and crime. Voisin, a noted physician of the staff, undertook to hypnotize her. At the time she had to be kept in a straight jacket. She would not look at him, but raved and spat at him, "He persisted, kept his face near and opposite to hers, and his eyes following hers continually." In ten minutes she was in a profound sleep, and passed into the somnambulistic stage. The process was repeated, and kept up for many days, and gradually she became sane while under hypnotic influence, but raved when she awoke. Gradually she accepted suggestion and would obey trivial orders while hypnotized. Then suggestions in regard to her general behavior were presented to her mind, and in the hypnotic condition she began to express regrets for her past life and form resolutions of amendment, and adhered to them when she awoke. Within two years she became a nurse in a Paris hospital, and her conduct was irreproachable. Voisin has reported other cures equally striking, and cured hysterical contrictures and dipsomania in the same manner. Hypnotic suggestion presents claims of value in correcting vicious habits in both children and adults.

The power of suggestion over the functions of the body is written large in Bernheim's statement that he has produced a blister by applying a postage stamp on the back of a patient and suggesting that it was a fly-plaster. But stranger still is the claim of Bourru that he caused a patient's nose to bleed at an appointed hour, and at a different time suggested that his name would appear written in characters of blood on his arms which he had previously traced with the point of a dull instrument. At the hour stated the patient fell asleep and on the left arm the letters appeared in "bright red relief," and in several places there were drops of blood, Dr. Mabille, Director of an Insane Asylum at Lafond, confirmed this wonderful experiment on a subsequent occasion. Bernheim observes that suggestion seems to act upon the cardiac functions and vasomotor system.

The legal aspect of this matter is a question worthy of consideration also. Not only is hypnotic suggestion capable of improving the moral condition but of producing demoralization of the individual, and the de-

velopment of criminal propensities is possibly within the limits of its influence.

Different views are held concerning the physiological condition of the several stages of the hypnotic sleep. Bevan Lewis states: "The earliest symptoms of hypnotism appear as the result of stimulation of the ocular motor tract in the medulla. There is spasms of accommodation; restricted accommodation range. Then there is stimulation of the sympathetic with exophthalmias, widening of the palpebral fissures, quickened pulse and breathing, dilatation of the pupils. Sarlo and Berardius studied the cerebral circulation during hypnotic sleep in an epileptic who had an opening in the crainal vault produced by a fall. With a bright light they induce the lethargic and cataleptic stages but failed to produce the somuambulistic stage. During the lethargic stage the brain presented the condition of hyperæmia; during the cataleptic, anæmia. They concluded, with Tamburini, that hypnosis only renders more marked reflex excitability existing in the individual in the inhibited state. Kramp explains hypnosis as a result of the change in the cerebral circulation. His belief is that those parts of the braim undergoing diminished function in the hypnotic state receive their blood supply from branches of the internal carotids, and the lower centres receive theirs from the vertebrals; and that the carotids are contracted in hypnosis and the flow of blood increased in the vertebrals. The surplus blood being forced into the external carotids explains the flushed face and the appearance of the eyes, while the hyperæmic condition of the medulla and cord produces the muscular rigidity which is further accentuated by loss of inhibitory control by the higher centres.

Others discredit the cerebral circulation theory and assign the cause entirely to the influence of the nervous system. The discovery of the movement of nerve cells in 1890 by Rabl-Ruchard in Germany and the subsequent confirmation of the fact by Lepine and Devol in France in 1894, and again in 1896 by two French physicians, Azonlay and Pupine, together with the significance of the explanation with reference to hysteria not only supports Charcot in his view of the analogy of hysteria and hypnosis, but also seems to throw light upon the production and operation of hypnotism.

Rabl-Ruckard advanced the idea that nerve cells changed their shape in a manner resembling the amœba. Lepine claimed that the neurons, which are the means of connections between nerve cells, were capable of movement to such an extent that those connections were interrupted.

Furthermore, it is found that the motor area of the cortex presents protoplasmic extensions directed outwards toward the surface of the cortex, the dendrites and also a protoplasmic extension downward, which becomes a nerve fibre. The latter is really a process of the cell body, however great its length, and is known as an axon. It passes downward through the white matter of the brain, the internal capsule, the crus, the pons, the medulla, and the cord and terminates in a brush-like extremity, the end tuft, which establishes a communication between the cortical cell and the motor nerve cells in the spinal cord.

Now, in a case of hysteria the neurons of the particular centres of the cortex in control of the parts affected are retracted it is believed in such a way that the end tuft in the spinal cord no longer maintains its normal relation to the spinal neurons. This breaks the connection between the cells, and the result is an abnormal condition which accords with the peculiar combination of cell action which prevails. As a result of suggestion, either with or without hypnotism, or spontaneously, the hysteria disappears, and the reason for it is, the processes previously retracted have regained their original normal relations. In other words, the end-tufts have resumed their natural relation with the spinal neurons and normal function has been restored.

It is thought that it is highly probable that this movement of cell processes is not confined to the end tufts of the axons, but that it is also shared by other processes of the nerve cell, particularly the collaterals, and it may be, to some extent, by the dendrites.

Disturbance of the action of the neurons from any cause must produce a consequent variation of the nervous condition. If the nerve cells become exhausted by fatigue, and this volume and cell contents have diminished, as has been observed by Hodgs Journal of Morphology, 7 :95; 9 :449. Evidently their processes retract and no longer remain in relation to one another as before. The neuron separated from its connections thus must be without function. General retractions of all the neurons must mean total loss of function, unconsciousness, with proper degree of retraction may mean sleep, with certain modifications and combinations of neurons must mean hypnotism or artificial sleep, with diseased neurons means insanity, with neurons irritated by toxic products means delirium, with faculty combinations to a degree which leads to imperfect recognition of objects means illusions, with perfect combinations under a high order of stimulus means exalted consciousness

and acute perceptions, all governed by the area of the cortex to which the stimulus is applied. In sleep, therefore, both natural and artificial the neurons are retracted; in consciousness their processes are extended; and in all subconscious conditions the neurons are obedient to the stimulus acting upon them.

There is still another view held by the distinctive followers of Mammer that there is a fluid or force accompanying the induction of the mesmeric state, and that it plays an important part in the explanation of the attendant phenomena. It is claimed that Liebault, the apostle of suggestions, admitted that there was a specific influence exerted by the mesmerizer upon his subjects which did not come within range of his line of suggestions. Furthermore, it is contended that there are two factors which enter into healing by mesmerism and healing by hypnotism. The one seemingly depends upon oral suggestions for its effects and the unaided power of the hypnotic condition over the functions of the body; and the other upon another force wkich exerts a positive effect upon the body, filling it with vitality. Confirmatory evidence is offered in a striking experiment. A patient was blind-folded and his hands placed upon a table with the fingers spread wide apart. The mesmerizer then made passes over one of the fingers with care to give no indication to the subject either by touch or atmospheric current which finger was to be affected. The result was local anæsthesia in the finger operated on, and in no other. Repeated experiments atested the accuracy of the result.

Another trial was made in which some one else guided the finger of the mesmerizer without his knowing which of the patient's fingers he was to affect, and the selected finger was unchanged.

Two facts were regarded as established by these experiments. The first one determined that there was an effluence eminating from the mesmerist, and the second that this effluence was in some way connected with the will or intelligence of the operator.

What such effluence consists in, if it exsists, is unknown. There is a vital fact underlying psychic phenomena is believed by some. But like other subtle forces it defies analysis. It seems to possess qualities similar to magnetism, and is stored up in and originates with the subliminal personality. It appears to be analogous to, if not identical with the same force which under other conditions has seemed to afford a basis, in the minds of some, for the call of spiritualism. To what form of this force many phenomena are due is still unsettled, notwithstanding the findings of the Seybert commission.

One of the important questions of the day is how are those psychic manifestations produced, and what is the force which underlies their operation? Does the influence of kinetic energy extend to the dominion of psychology? Does electricity and magnetism stand as janitors at the gateway to further exhibitions of a correlation from the shadows of which are thus being cast before it? May not psychic energy be more nearly akin to electricity and magnetism than is now known, and the brain and nervous apparatus constitute a kind of dynamore and Leyden jar for the generation and storage of the unknown fluid? There are such things as electric eels and electric fish They carry within an animal organism a sort of battery for the induction of electricity. Are they alone in possessing this faculty, or are there other representatives of the animal kingdom capable of exhibiting a degree of kindred force? There is an ascending and descending scale in the physical endowments, and may there not be an ascending and descending scale in psycho-physical energies? There are gradations in the orders of material things, and may there not be gradit'ons and similar differences in immateiial things? May there not be co-ordinate forces following in successive steps to electricity, magnetism, &c., some of which answer to the effluence of the mesmerise and are capable of influencing the welfare of human beings in a different way from present knowledge of the action of electricity?

There is an hypothecated project of conveying telegrams by other waves without wires. Every stroke of the battery here is borne on the wave to the sensitized and receptive surface in the distance, and an accurate message is recorded. In like manner may it not be possible that an electrified, animated brain may set in mortion other waves, which, directed by the will, may leap over space and annihilate time, and register the thought upon a sensitized and prepared plate in another brain in the distance? Telepathic communication is a mysterious occurrence associated with the subjective condition, and sheds light upon "absent treatment," or treatment of the sick person without the knowledge of the patient. Experiments by the London Society for Psychical Research have furnished data to stir the minds of European Scientists to to recognize the claims of telepathy, but want of space forbids more than its mention.

The higher manifestations of the hypnotic condition furnish a striking similarity to the strange occurrences of trance, clairvoyance,

clairaudience, vampirism, demonism, obsession, catalepsy, and suspended animation. Indeed, hypnotism opens the door of investigation to a new field full of problems, and the physician of true scientific spirit ceases to scoff at marvellous psychological phenomena. Hysteria lies near the border line, suspended animation afar off in the deeper waters, and clairvoyance, catalepsy, &c., float about in the unexplored regions between.

Till we understand further, let us continue opium, calomel, &c,, but, my brethren, do we not catch sight here of the shore of a new world?

President's Address.

Delivered before the North Carolina Medical Society at Morehead City, June 8th, 1897.

Gentlemen of the Medical Society of the State of North Carolina.

It was with many misgivings and fears that I accepted the office of President of your body, composed as it is of eminent and learned men. The responsibilities would have been felt too great had I not known how lenient you would be to any short comings on my part and how willingly each and all of you would extend any help I might need.

I must ask your aid in conducting this meeting which I trust will prove pleasant and profitable to us all.

It has been customary for some years that your President draw attention to any thing amiss in society affairs or with the profession and its concerns throughout the State, that he point out what he cenceives to be the best interests of this body and its members.

Following this precedent I shall leave to your wisdom the use of such remedies as may suggest themselves or the adoption of such resolutions as the conditions may demand. The only matter I have been called upon to decide was a disagreement among the members of the committee on Publication, the majority claiming the right to publish the transactions of the Society in a manner different from that desired by the minority. The minority, with the Secretary held that the N. C. Medical Journal as the organ of the Society should print the transactions as has been done heretofore.

The constitution does not define the duties of this committee, merely saying the Secretary shall place the proceedings of the Society in the hands of the Publication Committee within thirty days after the adjournment of the Society.

The Journal is the official organ of the Society; but whether its editor had the exclusive control of the transactions or whether, as the majority of the committee claimed, the exclusive rights of publication pertain only to the papers read before the Society is a question for you to decide. It is a matter of importance and should have your attention.

I have a communication from the Medical Society of Bernalillo County, New Mexico asking our co-operation with the American Climatological Association in obtaining tabulated statements of the U. S. Weather Bureau data with reference to their bearing on the treatment of disease. In view of the fact that North Carolina has so many health resorts, due in great measure to its climate, it might be wise for the Society to give its aid in this matter. I append the communication to this address for the use of such as may take an interest in the question.

History of the Society.—In reading over the addresses of my distinguished predecessors, I was profoundly impressed by the one delivered at Concord in 1882 by the late Dr. Thomas F. Wood, It is a paper showing great research and much learning. I commend it to those of you, who have never read it, or did not hear it and I assure its readers that it is well worth a reperusal. I copy a foot note from this address as giving an interesting item of history known I venture to say to but a limited number of your body.

"The earlist notice of a Medical Society in North Carolina" says the note, "is that mentioned in the Medical Repository of New York Vol. 4, page 202, A. D. 1800. It is possible that the Society had an existence for some time prior. A mention is made of it in Joseph Pignatius a rare book."

I quote further from the body of the address. "For eighty-two years with probably a short interval, there has been an organized effort in some degree of activity among our medical men. Most of their literary work has perished with the newspapers to which they were contributed; but the influence of that work still lives and still urges us on to more valuable acquirements." It has been said of North Carolinians, and in fact it may be said of the whole South, that they make history but their sons do not write it.

It is well worthy of remark that the information that there was a Medical Society in this State in the last Century should come from a publication in another state. Our Society has been the pioneer in much medi-

cal reform, her members have accomplished some splendid work, the memory of which will soon perish forever unless the solemn duty imposed on you as a body of representative medical men to preserve and perpetuate the deeds of our departed great men be fittingly and fully discharged. I urge that this sacred task be no longer delayed.

Those who are not proud of their ancestry will never do any thing to make their descendants proud of them.

The papers written by the men to whom I refer are scattered through old Society transactions and forgotten Medical Journals and in some instances, it seems newspapers. Even the fact of the death of some of the most distinguished among them has escaped mention by the Committee on Necrology. We of the younger generation are reaping the fruits of their labors. Can we do less than preserve their memories in a history of this Society and its great men?

I see before me men grown grey in their great calling, men who have done deeds worthy of heroes, not only upon the battlefield and amid pestilence and at the bedside but in recording their experience in many well written papers. Soon these too will pass away and with them much of the recollection of the grand achievements of our dead brethren.

To do well this work will require great labor, time and pains; but I am sure we have men competent to do the required work well and who will make this a labor of love. Let us at the least gather together all the records we have and preserve them in some less perishable form than they now exist. There are I believe only two complete sets of our transactions now extant. Not even in our State Library can one be found.

Board of Health.—This great reform to which the late Dr. Thomas F. Wood devoted so much of his time as well as his private means continues to advance. The yearly health conferences have a tendency to interest the general public in a subject, which concerns them much more nearly than it does us. It may be well questioned how far we as medical men are to go in preventing disease from the treatment of which we gain our daily bread. The public takes our gratuitous labor as a matter of course while forgetting that we are working for their good alone.

Already in Paris the revenues of the profession have been materially lessened by the improved sanitation brought about by the physicians.

The public are scarcely interested in this work for them and look on it as some fad of the doctors whereby they receive the profit and the glory. I grant the glory, but not the profit. Shall we continue this labor received so ungratefully and apathetically? Perhaps we owe society that much and will continue as we have begun, but there is a limit even to a doctor's temper and labor. The Board of Health during the past year took a new departure which cannot fail to be of the greatest benefit if properly encouraged and persisted in.

They have addressed themselves to the study of the defective classes of the State. There is no field of labor more worthy of attention from the physician and the Legislator.

North Carolina in 1890 with a total population of One million Seven hundred thousand had 1,725 Insane, 3,617 Feeble minded, 1,107 Deaf and Dumb, 1,592 Blind.

Of habitual criminals in our State there is no reliable record, but the number is large. For the care of the insane the yearly expenditure is nearly $225,000 not including that spent by counties in poor houses and jails, for the Deaf and Dumb and Blind nearly $125,000, while for the care of the Feeble minded there is no appropriation whatever by the State, yet we all know large sums are required for their maintainance constituting as they do a serious drain upon our resources and diminishing thereby the wealth of the community. It is possible that by proper Legislation and knowledge, insanity, idiocy, deaf mutism and blindness may be in some measure prevented thus saving untold suffering and much money.

It is well known that alcoholism and the use of other narcotics by the parent is a large factor in producing insanity and idiocy in the off-spring. Perhaps four per cent. for each class arising from these causes is not too high an estimate.

I have no statistics with reference to the production of criminals from these causes, but from my general knowledge of the subject I think the percentage as high as in the cases before mentioned. Much may be done by the Board on the lines mapped out by them in regard to this subject.

Consanguineous and other Marriages,—The profession has discussed at one time or other the results of consanguineous marriages. At the State Hospital at Morganton careful collation has been made of the statistics relating to this interesting subject with the result of showing that insanity and idiocy do not come from this source, Other observers confirm this. Perfectly healthy cousins are as likely to have healthy children as perfectly healthy persons who are not akin. As there are however but few healthy families, it is safer to discour-

age these marriages. There is a deep public prejudice against such unions and my observation has been that such prejudices are generally well founded.

The marriage of defectives is to be strenuously and systematically discouraged if we at all consider the welfare of the coming generations who are to preserve our civilization and manhood. Unfortunately for our work in this field, it is well known fact that persons of nervous disposition attract each other. A careful search of all sources of information regarding the causes of insanity at the Morganton Hospital show that not less than 50 per cent. of the patients have insane ancestors either direct or collateral.

In North Carolina where there is comparatively little immigration a rich and easily worked field is accessible for investigation on this subject, which affects so vitally the future manhood of the State. The children of drunkards, of imbeciles, of those with insane tendencies, of epileptics, of criminals, fill our charitable institutions and prisons.

In a recent paper read by Sir Fredrick Bateman, M. D., before the Medico-Legal Society on "Factors in the genesis of nerve disease and degeneration of the race" I draw much material on this subject. I shall quote largely from that paper.

Educational Overpressure.—This is a well worn theme, and yet the results are so disastrous that its lessons cannot be too often repeated or too strongly urged. It is a common sight in our hospitals for the insane to see young people there from this cause. At the Morganton Hospital there are two from the same school. I am afraid the fact is overlooked that physical health is a necessity to obtain an education, certainly the system of cramming, in vogue in some places, is ruinous to the weak and unstable brain.

The New Woman.—"I am quite aware," says Sir Frederick Bateman, "that I am treading on dangerous and delicate ground, but although I would not discourage the highest aspiration of women whether of an intellectual, social or æsthetic character, I must think a word of caution is necessary against overpressure of the present day." "As soon," says Dr. Seguin, "as women assumed the anxieties pertaining to both sexes, they gave birth to children whose like had hardly been met with thirty years ago."

Sir J. C. Brown, in his Oration on "Sex in Education," says: "To throw women in competition with men is to insure to them a largely increased liability to organic nervous disease. Woe betide the generation that springs from mothers among whom gross nervous degeneration abound." He claims that there are organic cerebral differences between men and women, and that they ought to be educated in different ways, being destined to play different parts in the sphere of life.

"There can be no question of superiority or inferiority," says he, "any more than there can be between a telescope and a microscope: but they are differentiated from each other in stsucture and function, and fitted to do different kinds of work in the world. He maintains that the weight of the brain is less in women than in men, that the specific gravity of the grey matter is less, that the distribution of the blood varies in the two sexes to a considerable extent, and that the blood going to the female brain is somewhat poorer in quality than that going to the male brain, and contains four millions and a half corpuscles to the cubic millimetre, instead of five millions in the case of the male."

Another authority asserts that the cerebellum in women is relatively larger than in men as compared with the cerebrum.

Mrs. Garrett Anderson and others controvert these opinions of Sir J. C. Brown. She says: "All I would venture to say is, that if it could be proved that an average man differs from an average woman as much as Newton differed from a cretin, it would still be well to give the cretin all the training which he was capable of receiving. When we hear it said that women will cease to be womanly if they enter professions or occasionally vote in parliamentary elections, we think that those who conjure up these terrors should try to understand women better, and should rid themselves of the habit of being frightened about nothing."

It seems that one of her own sex is of a different opinion, to Mrs. Anderson, as in a series of articles in the "Nineteenth Century," for 1891 and 1892, Mrs. Lynn Linton strongly deprecates any departure from the comparatively restricted area of usefulness hitherto open to women, and she even boldly states that it is for maternity that women primarily exist. She also adds: "Be it pleasant or unpleasant, it is none the less an absolute truth, the raison d'etat of woman is maternity—the cradle lies across the door of the polling booth and bars the way to the senate." The venerable Phœbe Coggens, after years of advocacy of female suffrage, changed her opinion upon maturer deliberation, and thought that the care of children was after all the proper sphere of woman.

It is not for a moment to be considered that I would in any way deprive women of the highest education and advancement; on

the other hand I believe that the proper education of the present generation of women means greater advances in the next. It is only against educational overpressure that I would warn them, and against unwomanly professions. Nothing can be more certain than that mothers cannot practice law or medicine, or take active parts in affairs of State and at the same time perform well the functions of wife and mother.

The Habitual Criminal.—Every criminologist recognizes that there is a distinct criminal class who is absolutely hopeless so far as any reformation is concerned. Let any one view a body of convicts and mark the asymmetrical heads, deformed features, the weak bodies and limbs, and the various stigmata of degeneration, and he will be convinced that no reformatory can ever work any good to them, and that there is nothing for society to do but prevent their reproduction if possible, and to protect itself against their depredations by confining them in prison.

Except for the limited work done by the Board of Charity, hampered as it is by the lack of funds for any investigation, criminology so far as my knowledge goes, is an untrodden field in North Carolina, and our legislators have never recognized these facts by any official action. The Board of Health, the Board of Charity, and you gentlemen of the medical profession, must move if there is anything done to protect society from these various evils which threaten its existence. What course must be taken is yet an open question. Legislators look to us for light, and we cannot do better than to study these vast and important questions. Asylum and prison physicians can do much, but you must give them your moral support. Last winter a bill was introduced into the Legislature of one of the Western States not only permitting but commanding the asexualization of certain feeble minded, epileptics and criminals. This course has been strongly advocated by various authorities. Without endorsing this, all of us will agree that it would be effectual so far in stopping the reproduction of these classes. It may be said that the same result may be had by sequestration. I again repeat that if any reforms on these lines ever come about it must be under your leadership. Up to now our State has been satisfied with the feeding, housing and clothing, and caring for her insane and criminals because of lack of means. If any united effort on your part is made, soon we will see educated pathologist and criminologist in every hospital and prison using the rich material now going to waste. It is to the pathological and chemical laboratories the clinician looks for help. Already our sister States are moving in this direction. Shall we prove laggards in the race for greater happiness and greater advances? From us the people expect aid in such matters. Let us not be called on in vain.

The Board of Medical Examiners.—This Board is giving renewed interest in its work, and is not only holding up the standard heretofore set, but making judicious and substantial progress.

The Committee on Legislation did good work last winter and should be continued. The thanks of this Society and every citizen of the State is due our confrere Dr. Abner Alexander, a member of this committee, also the member of the House of Representatives from Tyrrell county. No member of the House could raise his voice against our noble profession and our salutary medical and health laws without a prompt and effective reply from our loyal and competent brother member.

This Society, we are proud to think, has done much for our State and generation, there is much yet to be done and unless we progress soon we will begin to go backwards, we cannot stand still, we must move forward or we will be mere cumberers of the ground and would richly deserve to be swept into oblivion, as we assuredly would be.

In conclusion, gentlemen, I want to thank you for the greatest honor ever conferred, or can be conferred. I am fully aware of my inability to fully discharge my obligation; I can only say, I have done my best.

The Ideal Antipyretic,

By E. C. Goodman, M. D., El Paso. N. C.

In the discharge of the duty imposed on me as Chairman of the Section on Materia Medica and Therapeutics, I shall not essay an enumeration of the many recent additions to the materia medica with an epitome of the literature on the same.

Such a procedure would be prolix, and devoid of interest to those who have kept abreast with the current literature of the subject. The field of experimental research for every observer is necessarily limited, and the period of a few months is far too short to demonstrate the true merit of a valuable remedy, or to relegate a worthless one to the shades of oblivion.

The conscientious practitioner is accustomed to regard with skepticism the ex-

†Read before the North Carolina Medical Society at Morehead City, June 8th, 1897.

travagant claims of excellence made in behalf of every new remedy by those who are accustomed to bow at the shrine of novelty, and worship at the altar never graced by genius.

Medical literature is daily teeming with wordy productions which represent only the gush of enthusiasm inspired by every innovation which offers a transient gleam of hope for success in the conflict with disease. These productions of the pen laudatory of the improved virtue of some medicament, are often based upon the imperfectly observed results obtained by the administration of sample package gratuitously distributed by the manufacturer.

Before a therapeutic remedy can receive the stamp of permanent utility, it must be thoroughly tried in the crucible of clinical investigation based on scientific principles; for a few favorable results attending the use of a certain kind or method of medication may be coincident with the recuperative energy of nature and not due to the means employed.

In asking your attention to the consideration of the subject selected, it may not be unnecessary for me to preface further remarks with the statement that "the ideal antipyretic" is a hypothetical substance and not an actual entity.

We have not yet reached the stage of perfection in which the materia medica is enriched with a remedy that measures up to the ideal in the treatment of pyrexia, though such an attainment is a "consummation devoutly to be wished."

In recent years the labors of the synthetical chemist have been rewarded with no more brilliant results than the production of that class of drugs known as antipyretics. Others, indeed, having been announced to the world by some of the master minds of medical science, have enjoyed a short lived notoriety due to the expectations of usefulness inspired by the prestage of these great names.

The old time conception of the conservative nature of pyrexia as being a manifastation of the reaction of the human organism against pathogenic germs, and therefore eliminative, has led many to deprecate the use of antipyrectics and to assign them to a place of secondary importance in the treatment of disease.

Such a conception is too vague and speculative to be entitled to serious consideration. However ingenious the hypothesis; however plausible the theory; and however illustrious may be the names of the advocates of such theory; yet, the accumulated evidence of clinical experience stamps it with an emphatic negative.

The field of therapeusis almost entirely is circumscribed to symptomatic treatment. To reduce temperature; to relieve pain; to regulate disturbance of the circulatory apparatus; to sedate an excited nervous system or to stimulate the same when depressed; to check or neutralize abnormal discharge; to stimulate the glandular organs to normal activity; and to nourish the patient with suitable aliment; these are indications for the exercise of every therapeutic resource at command.

It is a lamentable commentary on the boasted achievements in medicine that, at this late day, we know of no remedy entitled to be called a specific, if we expect the action of quinine on the hæmatozoon of malaria and the influence of mercury on syphilis.

Ever sinch the searchlight of modern science has revealed a hitherto unknown world of living organisms as the potent cause of many of the ills of human flesh, it has been the cherished object of therapeutists to take the shortest route to success by administering the death dealing portion directly to the invisible causative agents of disease.

However laudable the object in view, the means for its attainment are unknown, save in the two exceptions noted above, and until such remedies are found, therapeutic skill finds its legitimate exercise in controlling symptoms as they arise, and in aiding nature to resist the inroads of disease.

Of all the symptoms that manifest the presence of disease, there is none more often encountered and none more deleterious in its effects on the human organism than pyrexia.

However imperfectly understood may be its cause, whether due to the action of the products of pathogenic organism on the thermic centres, or some other cause eqnally obscure, its results are such as to remove the "flattering unction" that it is a conservative process rather than a pathological element that decimates the human family by its own destructive influence.

Beginning as a symptom it soon becomes the initiation of a series of morbid phenomena more widereaching and destructive than those which properly characterize the primary cause.

When we consider the almost uniform temperature of the healthy human organism and the narrow limits of variation compatible with life, we read the handwriting of nature in legible characters dictating the course to be pursued when the temperature departs from normal.

Bacteriologists have abundantly proved that the lowest forms of life are far more

resistant to the action of heat than is the highly complex and delicately formed structure of the human body. With this fact established beyond all cavil, we are forced to the conclusion that fever is conservative to the human body in the same way that the sword of Hamlet was conservative to the body of Polonius when it made of him a supper for a "convocation of politic worms."

The injurious effects of fever are clearly manifested to the most casual observer in the sick room and are demonstrated by the pathologist on the post mortem table. It is itself a toxic agent, perverting the function of every organ and acting destructively on every tissue, and, if long continued, needs but to pass very narrow limits to effect the dissolution of the body with a certainty and rapidity that shames the tardy action of the much dreaded bacteria.

The constant attendance on pyrexia of such symptoms as restlessness, jactitations, delirium, hebetude of mind, convulsions and coma, and the rapid subsidence of these symptoms on abstraction of the excess of heat would plainly indicate that whatever may be the source and cause of the disease, pyrexia as a disturbing element is second to none.

Parenchymatous degeneration of muscular tissue is a constant accompaniment of, and often dependant on, pyrexia, and increases with each increment of temperature. No muscle participates in the degenerative more than does the heart, and in fevers long continued, this becomes a source of trouble that baffles the skill of the physician, and often consigns the patient to an untimely grave.

The role which fever plays as a factor in disease is well illustrated by the phenomenal reduction of mortality in enteric fever by the cold bath treatment.

Here, obviously, no fine spun theories of germicidal action can share the glories of the triumphs which therapeutics wins over disease. The good accomplished, apart from the invigorating influence on the nervous system, depends on keeping the body at or near that temperature which nature ordained as the most suitable for its youth and perfection, for the healthy performance of its functions, and as the greatest safe guard against microbic invasion amid the ever reaching vicissitudes of climate.

Ever since the time of Galen the utility of the external application of cold to counteract the dire influence of fever challenged the consideration of the profession, until its efficacy was demonstrated to the world and stamped with the seal of permanence by the labors of that benefactor of humanity whose name is synonymous with the cold bath treatment.

Antipyresis is a therapeutic resource that has passed beyond the stage of experimental uncertainty, and verifies its claims to preferment by the great percentage of human lives that have received a new lease of existence under its benign influence.

That we have antipyretics prompt and certain is a fact too well known to need confirmatory comment; but the property on which their value depends is so intimately blended with others of a dissimilar nature as to restrict their usefulness at a time when their use is imperatively demanded.

Without the aid of prophetic inspiration to penetrate the veil of futurity, with the experience of the past and the light of the present, we may rationally conclude that the time is not far distant when there will be given to the profession a drug that will effectually reduce temperature without any disorganizing influence on the circulating fluids, and without causing dangerous depression and collapse of the vital powers.

Such a remedy will not be a panacea, but it will be the ideal antipyretic.

Whether it exists ready formed by the vital activity of living vegetable cells to be revealed by the analyst, or whether it will be evolved from the complex problems of synthetic chemistry, he who first demonstrates to the world its true value will mark a new milepost in medical progress, and will have his name perpetually engraved on the imperishable tablet of humanity's gratitude along with the name of the discoverer of general anæsthesia.

Diphtheria Antitoxin. †

By J. Meigs Flippen, M. D., Salisbury, N. C

In bringing this subject before this Society, it is not what I may have to say, that will be a source of enlightenment to our members, but the general discussion which I hope to inaugurate by my remarks that will be of benefit to us.

How shall we treat diphtheria? This seems to be the subject above all others, which, today is interesting the attention of our profession. Shall we treat diphtheria medicinally, with a high rate of mortality, this plan of treatment gives; or shall we pin our faith and intrust the lives of our patients to the newly risen star of hope, Antitoxin? Before we accept or reject this highly scientific product of the culture tube and the guinea pig; let us study the

† Read before the North Carolina Medical Society at Morehead City, June 1897.

source and action of Antitoxin, before prescribing it.

The acceptance of statements and rumors as facts, upon insufficient evidence and want of positive proof has flourished as the offspring of ignorance in all ages. It has furnished, and undoubtedly will continue to do so, material for many chapters in the history of medicine, It inspired the senseless and almost incomprehensible belief in witchcraft and demon possessed human beings, and prompted the oft repeated and always unsuccessful search for the philosophers' stone and the *elixir vitæ*. This tendency to belief in unauthenticated rumors and not upon facts, probably exists today in as marked a degree, as far as some things are concerned, as they did in the age we look upon as that of the grossest ignoranee and superstition, although the absurdity of it is not as patent to us as it will be in ages hence, when perhaps many of the hobbies of our profession and most generally accepted theories are proven absurd and false, As a proof that our profession is not above these absurdities and that very many theories and remedies, which for awhile are considered as true and infallible are mere fiascos, based upon this tendency to accept things and facts unproven, as proved, it is but necessary to call our attention to Brown-Sequard's Elixir of Life, Hammond's Cerebrine and Koch's Tuberculine, which upon the inspiration of the moment were considered as remedies, yet, what self-respecting member of our profession would today prescribe these nostrums as remedies, sure and specific? It cannot be denied, however, that it is largely owing to these men that medicine occupies the high standing in the scientific world that it does today, more especially to the scientific researches of Koch. Thus, when we view the shattered idols of these profound scholars and scientists, by the pale cast of thought, it behooves us, the vast army, to accept their statements with cool circumspection. Now, in order to do so relative to Antitoxin, let us see; What is Antitoxin? It is a serum that was first discovered by Behring and Kitasato while trying to perfect the tetanus antitoxin. Any animal may be used for the development of this serum,

The horse has finally been selected as the more suitable as he is more uniformly healthy, of quiet disposition, more easily operated upon and furnishes a larger proportion,of serum.

As to its development and culture, especially where as virulent a culture of the diphtheria bacilli as is possible is desired, the bacilli is grown upon Loeffler's solidified blood serum and one part of a one per cent glucose bouillon; this is then placed in a temperature of about 112 F. for twenty-four hours, after which the bacilli are found to be well developed; then single colonies of these bacilli are transferred into flasks containing a two per cent. alkaline peptone bouillon, then placed for forty-eight hours in an incubator at a temperature of 100 F. The contents of the flask are next transferred by pippets into larger flasks and placed in an incubator at the same temperature and kept there until the bacilli have become very numerous and produced in the bouillon their characteristic toxin. The microscope is next used in order to determine that no other bacilli than the diphtheria is present; an antiseptic is next used to kill the diphtheria bacilli and preserve the culture from decomposition; in other words to prevent its contamination by other micro-organisms. The usual antiseptic is tri-kresol, as it is comparatively harmless to animals and does not by its odor prevent the detection of decomposition, should it occur. The bouillon is now filtered through a modified Chamberlin filter, to remove the dead bacilli. The resulting product, freed from the bacilli, is simply a solution of the toxin secreted by the bacilli; it is an intense alkaloidal poison, the same that poisons the diphtheria patient if they do not overcome it, or die of suffocation by obstruction of the air passages by the pseudo membrane.

The exact toxicity is determined by its action upon small animals preferably the guinea pig. The horse having been tested for glanders and tuberculosis and found to be healthy, is given a minute injection of this toxin. This does not produce diphtheria in a horse but causes a slight œdema at the point of injection with some febrile manifestations, This indicates nature's manifestations against this toxin—her formation, in the blood, of an anti-toxin, just the process that occurs in the patient with diphtheria, or as to that matter with pneumonia, and when a sufficient amount of the antitoxin is formed in the blood of the patient to neutralize the toxin, resolution sets in and the patient recovers. These injections are repeated upon the horse every six days for about three months, increasing the amount of toxin at each injection, until at the end of the three months there is no reaction from the most virulent toxin that can be produced. This is an indication that he is immunized against diphtheria and its toxin or poison, that is, his blood is as full of antitoxin as it can become. Next, a trial supply is drawn from the jugular vein, then the serum is separated from it

and its antitoxic power tested by employing it upon guinea pigs poisoned with the toxin. If the antitoxin is found to be of suitable strength, the horse is bled freely, the serum or antitoxin collected, sterilized and sealed in suitable bottles and is then ready for use, Such is what I understand to be antitoxin.

Before proceeding with this subject further, it might be well enough to study the disease for which we propose a remedy. In this way we may arrive at some definite conclusion as to the merits or demerits of the remedy under consideration. What is diphtheria? There are two definitions, the latter of which I think the correct one.—First, it is a systemic disease, with both general and local manifestations, the local manifestation being secondary and caused by the systemic poisoning. That the Klebs-Lœffler bacilli are the result of the systemic poisoning and not the cause of the systemic disturbance. That the diagnosis rests upon the systemic and local manifestations. Second, Diphtheria is a local specific disease, due to the presence and action of bacilli, characterized by a deposit of pseudo membrane as the site of infection, accompanied by constitutional disturbances and followed by nervous symptoms, due to the absorption in the circulation of a virulent chemical agent, toxalbumen, which is produced by the local development of the Klebs-Lœffler bacilli. As to diagnosis, the only pathognomic feature of diphtheria invariably present is the specific micro-organism known as the Klebs-Lœffler bacillus and that it produces at the point of infection a chemical poison—toxines—which being absorbed into the circulation, gives rise to the peculiar nervous symptoms. This is the cause of the constitutional disturbance of diphtheria. The Klebs-Lœfflller bacilli are found only at the points of infection, not even dipping down into the deeper tissues beneath the membrane. They do not invade the circulation, but the toxines produced by these bacilli are taken up by the circulation and by their virulent action upon the system may produce death in a few hours. If this be true that diphtheria is a local disease caused by the Klebs-Lœffler bacilli and they are situated locally and do not penetrate the tissues and are not taken up by the circulation, then, it might be asked, why not treat the disease by local antiseptics, destroy the bacilli and prevent the absorption of the tissues, which are the cause of the constitutional disturbance?

Is diphtheria a local or a constitutional disease?

If local, when should we cease local treatment? When commence constitutional? (If constitutional), and if constitutional, why ever use local treatment at all? From my personal experience, local treatment is indicated in the early stages and is discontinued in the later, provided, it be a severe attack, when, constitutional measures should be instituted and pushed with vigor, especially stimulants. But now that we have antitoxin, if it proves a better plan of treatment, I think it the duty of every physician to employ it in preference to all other plans of treatment, if it is true that it lessens mortality and that it is better remedy than all others, then if we fail to use it, we are no longer worthy to be classed as intelligent physicians. If we do use it, it does not follow that we must discontinue all other treatment, but we are to continue our other treatment just as if antitoxin were not used. In this way we are likely to obtain the best results.

The theories of Metschinkoff's phagecytosis and Buckner's Ale xcenis both point towards the antitoxin theory.

The phagecytic theory supposes that immunity depends upon the seizure of invading micro-organisms by amœboid cells, chiefly leucocytes and other mesodermic cells, and the subsequent destruction of these organisms in the interior of the cells. That the leucocytes are charged with the defense of the body and engaged in a war of extermination with any parasite which may be introduced within our economy. That the phagocytis eat up, digest and annihilate the most virulent bacteria and when the phagocytis have gained supremacy over the micro-organisms, then immunity is acquired.

Now, in connection with this process of the leucocytis, is that of the glands, or rather cells, that by which they form a bacteroidal agent, which may be called nucelin. That, from introduction from without of certain micro-organisms, the body fluids may acquire bactericidal properties as regards the special micro-organisms introduced. This might be termed natural immunity. Such, for instance, as a patient suffering from acute pneumonia, for several days with high temperature, when suddenly the fever drops to normal and the case ends by crisis, or self immunity, say by phagecytosis. If this be not the case, we know there must be a cause. Why this sudden abatement of all the alarming symptoms? Is it not reasonable to suppose that the toxins which were producing the high fever and general disturbance of the system, have formed in the blood an antitoxin which has neutralized the poisons and thus resolution sets in.

Now, to go from a natural immunity to an acquired immunity, seems to be but a short step. To take the toxins of a special diesase, say diphtheria, and by injection into some animal, keeping up the injection for a long period, or until no reaction takes place from the toxin, then will not the blood of that animal contain a large amount of antitoxin? Now if this antitoxin rendered inert the toxin in the animal, why will it not to a certain extent have the same action upon any other animal suffering from the disease produced by the special toxin? This is just what diphtheritic antitoxin does. For as to the proof that it does this. Take two guinea pigs of equal weight, inject each with a fatal dose of the toxines of diphtheria, (or Klebs-Loeffler bacilli) then inject one with the antidote for this poison; that is antitoxin; and do nothing for the other pig. The one that receives the injection of the antitoxin gets well, the other dies. Does this prove anything? I think, so far as it goes, it proves that antitoxin is as much an antidote for the poison of the toxines of diphtheria, as ammonia is an antidote for the poisoning of hydrocyanic acid, or in fact any other poison and its antidote.

Now, the advocates of antitoxin claim that to be effective, the remedy must be used in the earliest stage of the disease: that, if used in the last stage of the disease it will be followed by little, or no beneficial results.

I believe no one would claim any, or little benefit from an antidote to arsenical poisoning after structural changes had taken place, still, it does not follow, that the antidote if administered immediately after the poisoning, would not have prevented the structural changes, with ultimate death.

The consensus of opinion of the medical world as to the use of antitoxin seems to be largely in its favor, as a therapeutical remedy in diphtheria.

I fine upon careful investigation that individual statistics as to the ultility of a remedy, are comparatively worthless, and are not to be relied upon; that by individual statistics you can prove the mortality of diphtheria treated by antitoxin, to be 5 per cent., while, by the opponents, you can get clear and seemingly conclusive proof that the mortality is largely increased by the use of antitoxin. Therefore the only way to arrive at an unbiased opinion, is by taking a large number of private physicians residing in different localities, and comparing their results with the remedy, and their opinion as to its efficacy. Tais, the American Pediatric Society have attempted to do in an impartial manner. Now, statistics to be of any real value, depend upon four factors. First, the number of cases; Second the conditions under which they have been observed; third, the accuracy with which they have been reported; fourth, and the care and honesty, with which they have been analysed. With these considerations in view, I will give the Societies Report, (in part). The circular letter asked for information upon the following points; age, previous condition, duration of disease, when first injection was made, number of injections, extent of the membrene, tonsils, nose, pharynx and larynx; whether the diagnosis was confirmed by culture; complications, thus, viz; pneumonia, nephritis, septis, paralysis; the results, other treatment used, and general impression drawn from the case. Reports were received from 615 different physicians; with 3,628 cases. Of these 244 cases were excluded on account of doubt in diagnosis, no culture having been made. This leaves 3,384 cases for analysis. Taking from 615 different physicians residing over 15 States; cases the tonsil alone were involved; in 1,397 cases, the tonsils and pharynx, tonsils and nose, and all three involved; in 1,256 cases, the larynx was affected, either alone, or with the tonsils. Now, adding the above cases, to those of the New York Health Board and Chicago Health Board, we have a total of 5,794 cases; of this number, the committee finds 4,837 cases verified by a bacteriological examination, with 556 deaths, giving a mortality of 11.4-10 per cent. This excludes those cases which were moribund upon first injection; including the moribund cases, we have a mortality of 18 per cent. This, in brief, I find to be the gist of the Report.

I have examined a large number of Reports from individuals, who wish either to prove that antitoxin is the remedy par excellence, or that it is detrimental to human life. I find that neither can be relied upon and that such reports do the remedy more harm than good, and prove absolutely nothing. As we all know, figures may be twisted to prove propositions which are diametrically opposed to each other. But, I find this Committees Report is perfectly fair in every detail, and carries a preponderance of evidence in favor of antitoxin as a therapeutical remedy in the treatment of diphtheria. One other fact in this Report deserves special attention, and that is, that 553 cases were laringeal and required intubation, that in these there was a mortality of only 25.9-10 per cent. Now, if diphtheria antitoxin is worthless in all other cases and can give us such low mortality in

these cases, it deserves to be classed as the greatest medical discovery of the age.

Diphtheria of the conjunctiva is of relatively rare occurance in the United States; however, it does occur and is so rapidly destructive to vision that it is important to know that we have a remedy in antitoxin, which will arrest its ravages and prevent blindness, the membrane disappearing in from 24 to 48 hours after an injection of 10 c.c., of 1,600 units of antitoxin is administered,

Let us study for a few moments the arguments against antitoxin.

That no one has ever seen the antitoxic properties of the remedy, that you are injecting into the system a ferment which may kill by paralysing the heart, that it sometimes produces fatal convulsions, that it produces acute nephritis, that it fails to shorten the attack of diphtheria, that it fails to prevent paralysis, but on the contrary often produces it; that it produces an erethimetus eruption; that its dose is uncertain, that it is contra indicated where there are mixed cultures of streptococcus or straphylococcus, or where complicated with scarlet fever, or measles; that you should inject a case before you make your diagnosis; that Behring gave antitoxin to the world as a specific against the toxins of the diphtheria bacillus. That it has no action on the bacillus, they are not destroyed by the antitoxin, it is not rendered less virulent, it is in no way influenced by the treatment.

That diphtheria in man is rarely, if ever produced by the Loeffler bacillus, that the bacilli are found in the mouth and throat of perfectly healthy people, who have no other symptoms of diphtheria, and who remain free from any attack of the disease. In this way, the opponents of antitoxin, claim that the advocates of antitoxin get their low mortality by taking the evidence of the microscope in lieu of clinical euidence.

If antitoxin is an antidote to the toxin of the Loeffler microbe, cardiac depression, death from cardiac paralysis, albuminuria and post-diphtheritic paralysis should all be prevented by the action of this agent.

That it has utterly failed to accomplish any of the results for which it was claimed and intended. As a proof that antitoxin is a dangerous remedy instead of a dissideratum Dr. Winters sites 25 or 30 cases of favorable prognosis which had been injected on the 1st, 2nd, and 3rd, day and still died, and seemingly, from Dr. Winters' standpoint, were killed by the remedy.

Then Dr. Winters gives statistics gathered at home and abroad, proving that the mortality of diphtheria is higher under the antitoxic treatment than without it.

Now, all the advocates of antitoxin claim, that to be effective it must be used in the early stage of the disease; now, bearing this in mind, I wish to give one of Dr. Winters' own tables of statistics, which I think, is in favor of antitoxin.

At the Willard Parkar Hospital during the first nine months of 1895, the results were as follows, viz: Beginning treatment on

1st day 108 cases, mortality 10.9-100.
2nd day 130 " " 25.19-100.
3rd day 116 " " 34.18-100.

This, according to Dr. Winters' own statistics, shows that if antitoxin is used in the very first stage of the disease, the mortality is very low; but, if used later on in the disease, it is not so effective. This, I think, is all the advocates of antitoxin claim.

During the past year, the death rate from diphtheria, at the Municipal Hospital (Philadelphia) was 22.2-10 per cent. of the 869 cases of diphtheria admitted to the Hospital during 1896; 533 cases received the antitoxin treatment, in addition to other approved treatment, and of this number 142 died, a mortality of 25.67-100 per cent; 316 cases were treated by remedies other than antitoxin, and of these 51 died, a mortality of 13.29-100 per cent. At first glance, we see a difference in the mortality of 12.38-100 per cent. in favor of other treatment than antitoxim. But, if we notice the statement of Dr. Wm. M. Welch, the physician in charge, that no scientific test of antitoxin was attempted. it may readily be inferred that the cases not receiving antitoxin were so mild that it was not considered necessary to give antitoxin; that they ought to recover on any treatment. On the other hand, those cases receiving antitoxin treatment were considered too dangerous to be trusted to medicinal treatment alone, but also received the antitoxin.

This is another case where figures, without lying, can be made to misrepresent facts.

Had medicinal treatment been followed in all the cases the probabilites are that the mortality would have been much higher than it was; and had the mild cases received the antitoxin, the probabilities are very strong that the mortality would have been much lower than 12.38-100 per cent.

Those opposed to the use of antitoxin in diphtheria were fond of pointing out Dr. Virchow as being against the use of antitoxin; but, since Virchow has changed his views in regard to the use of antitoxin, and has become an advocate of its use, you never hear him quoted any more.

Now, in conclusion, let me say, if there

is any one thing in the Medical world more than another which will mark the beginning of the 20th, century, it is the lessening of therapeutic agents by physiological methods of theraphy, which have been shown to possess the power of antagonising specific pathogenic germs; by distributing to their ultimate destination nutrative material, and stimulating the physiological functions by normal physiological influence.

We do not claim to have discovered the Fountain of Youth, but that we are living *very* near the age when the medical world may hope to discover that man carries within his own economy an antidote to all contagious and infectious diseases which have cut short mans allotted time, that, from the present outlook of the scientific medical world, future generations may hope to die a physiological death.

A Few Hints in Medico-Social Ethics.†

By Chas. J. O'H. Laughinghouse, M. D., Greenville, N. C.

Ladies and Gentlemen.—It is my pleasant duty, first of all to thank this Society for the honor conferred in selecting me their annual orator. Like all honors it has to be dearly paid for. The busy life of a general practitioner leaves little time for speech-making, that belongs to another craft, and when we would essay to climb the dizzy heights where the silver tongue orator walks serene, it means that the mountain must first be in labor, and it often, bring forth nothing but a mouse. I realize deeply the responsibility, the opportunity and the limitations of this occasion; and while the gentle breezes from Morehead, "nature's great sanitarium" kiss your cheek and drive away all anxious care, I shall attempt to present, neither a learned oration nor a technical address.

It is my purpose to be entirely practical, and lay before the laity as well as the profession a few hints on medico social ethics. My reason for selecting such a subject, is due to the fact that the medical profession and the laity, have many interests in common which on account of silence on the physicians part, and a consequent lack of information among the laity, are being sorely neglected.

Since the day when I first realized what it was to be a member of the medical profession, I have longed to witness a time when the profession and the general public should join hands in an ethical compact that would result in a further advancement of practical medical science, thereby advancing humanity as a whole. There are many glaring faults we might collect could we but catch the public ear.

That day has passed when medicine was considered so full of mysticism and superstition that no one outside the profession could realize and understand its practical application. That it is a science is no longer the mooted question of even a few years ago. The persevering research of medical men have made diagnosis and treatment of disease so exact that there are but few who deny the scientific aspect medicine has acquired and that it is still advancing with great rapidity cannot be denied.

Take the best works on Pathology, General Medicine, Surgery or Therapeutics written ten years ago and compare them with authorities of today and one is astonished to see how much is old and seemingly outgrown. The stupendous discoveries and advances made from day to day cause medical books of 1890 to seem like history rather than present day conclusions. No other branch of since has advanced so rapidly and under so many difficulties as medicine. No new scientific fad has aroused so great hopes and none has so superbly gratified some of them as that of the disease producing influence of minute organisms called bacteria,

The influence as causes of disease is now established beyond controversy and to this discovery is due to revolutionizing of surgery the extinction of surgical and pueperal fever and the prevention of contagious diseases by serum therapy. Every department of medicine has been electrified by the partial success and perfect promises which this discovery holds out to mankind. In the same, though perhaps in a less striking way, a noteworthy advance has been made all along the line. There is now no subject of medical study that does not bear witness to the spirit of accurate and exhaustive research which characterizes our age. Simply to enumerate the glowing incidents of advance would require a volume the brightest and most blessed pages of which would be those dedicated to preventive medicine. The physicians of the world as a body are today laboring for the public good with a zeal and an intelligence combined with an unselfishness which no other profession, occupation, trade or calling can even hope to rival.

Humanity at large could study with much profit the etiquette and advance of medicine. When they realize that medical men are tirelessly seeking by Hygene and Preventive medicine to render their own calling

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useless and superflous and themselves occupationless, when they realize that all over the world, every true physician whenever asked, gives his services to the poor without demand or thought or even hope of compensation, when they realize that it is a medical tradition that the disciples of this profession must gladly renounce the usual ideals and commercial methods and devote themselves to the Healing Art imbued with the determination to follow it for the good of humanity more than for the good of themselves when they realize that the entire tremendous labor for the benefit of the poor of keeping up the enormous hospital work of all the great cities is borne by physicians without a cent of pay, when these things are realized I say, the public will appreciate more thoroughly than they now do the great usefulness and self-sacrifice of medical men. Then the ignorant misconception, the non-recognition of and opposition to, the true work and worth of mordern medical science will be superceded by a new order of things that cannot fail to place the medical profession in the front ranks of those who toiled to bless their fellow man.

The public will aid us when we teach them why they should and how they can assist in correcting many evils that are stalking about doing damage to our land today. For example : the Hygiene of female schools, boys schools are bad enough, but they suffer so much less that they can go on unmolested until we can succeed in doing something for their sisters. How many of you are there who have seen young girls strong, well and healthy leaves home for college and comes back weak, nervous, chlorotic, in fact wrecked in body and in mind to such an extent that they can never again recover all that has been lost. Is it from hard study? No, it is from injudicious study, improper hours, improper sleeping apartments, improper food, improper management in ways that I cannot mention here because it is a text for a volume. What are we to do about this? The very look of these poor children is an appealing call to every thinking man or woman urging that something be done to correct the criminal neglect of the physical well being of these innocent souls who are to be the women, wives and mothers of the future. They are carefully taught and the most stupid of them learn the small social laws and the criminality of violating them. Is it more important to know these things than to understand and appreciate the simple commandments which if carefully practiced lead to health and to a respective increase of happiness and prosperity? Would it be unwise to have in every female school a chair of hygiene presided over by a compentent instructor, who would teach them by lectures and by example the best way to live? The practical methods of prevention of disease the art of medical cleanliness, the utmost importance of a thoughtful marriage, that their offsprings might avoid the diseases of Heredity? The misery this will prevent, the good it will do is not to be seen in our day, but the stalwart health and the intellectuality characterizing the men and women of the fu ure will be the monument erected to bless our wisdom.

I could point out a thousand things the public ought to know, the way one sits in reading and the way a book is held may mean years of ocular suffering. Every article of dress, especially the corset has a medical significence. Why women will wear them is beyond the pale of common sense. Every man whom they think they are pleasing is only disgusted with their wasp-like waists and thoracic breathing. Without it the profession would be much out of work, yet we will hail with delight a time when the fashion formers will have made popular the Jenesse Miller styles which allow freedom of a woman's breathing apparatus and her body generally.

The food we eat, the way it is cooked and eaten is medically most important. Instead of teaching music and painting to every inmate of a female school, no matter whether talent is possessed or not, would it not be wiser to give some lessons in the culinary art to those whom in all probability would make better housekeepers than handlers of the pallete and brush.

Now we come to a business, patronized by the public, which is doing more harm than all the plagues, pestilence and famine which infests our country. I refer to the patent medicine fraud. My friends, it is a disgrace to the nation, it flourishes nowhere else as it does in these United States. Even semi-barbaric countries have forbidden the entrance within their borders of these vile concoctions of danger, ignorance and nausea devised to strip the poor of money and to fill their bodies with poison. What a ridiculous farce that any public credited with sense enough to vote should purchase these cure-alls containing they know not and cannot know what, compound by they know not whom, vouched for by no one, a shotgun prescription, fired at a disease in the abstract, an unknown remedy, for an unknown disease prescribed by an unknown hand. Thinking of this death dealing evil probably evoked from the great Dr. Oliver Wendal Homles the witticism, "if all the medicine were thrown into the sea it would

be good for the humanity but bad for the flsh."

We medical men realize that the favoring of this crime by the public is to some extent a sin of ignorance and we pray "Father forgive them for they know not what they do" but is it not our duty to do more than pray. This is a part of Preventive medicine neglected as are a great many other sources of prevention, simply because its success depends upon the public and the public has not been enlightened enough to see the necessity or know the methods of prevention. True the physicians can say that they have tried to protect the public from these patent medicine venders by attempts to have laws enacted against the charlatans. Laws to elevate the medical profession thereby elevating the public generally but the interested and combined hordes of quacks have so intimidated and bought up our measley legislators until they are too weak to vote for decency, thus the patent medicine outrage flourishes, conrols legislation, pollutes human health, poisons human bodies, while every newspaper, barns, house and fence are heralding their false and beastly advertisements, which advertisements the pnblic read, believe and do what is asked of them purchase. Now what do they get in return for their cash? Some worthless, dangerous nostrum, a feeling of contempt for their blissful ignorance from the fakir of drug clerk whom they allow to persuade them into purchasing the worthless article. Is this due to stubornness, lack of interest or ignorance on the part of the people?

When a boy I was amused at the closing remarks of a famous patent medicine vender who termed himself, Dr. Allen. After selling a goodly number of his preparations in the public square of our town he concluded his harangue by saying "my friends, before bidding you good-bye, I want to say for Pitt County, that its people have more money and less sense than the inhabitants of any section of Eastern Carolina." His remarks would not be inappropriate if applied to the whole State so far as purchasing medicine is concerned.

Have we. as guardians of the public health, taken enough pains to impress upon our lay friends, the danger of allowing and encouraging this baneful patronage of patent medicine fakes. The above may also apply to the irregulars and quacks both in the profession and out of it. The newspapers are filled with all sorts of spurious medical advertisements bent only on getting money without knowledge knowing nothing and caring nothing about curing. When the public sees in the papers an account of some marvelous operation performed by some sneaking advertiser in the profession or some pompous nonsense about professional matters they flock immediately in answer to the advertisement forgetting that the advertiser is directly in collusion with the newspaper reporter and that his opinion upon medical questions is scientifically valuless. Strange beyond all strangeness is the love of the public generally for being duped. Quackery may be likened to an artificial eye, everybody sees through it except the patient. Should we censure or pity, should we abuse or instruct our friends outside the profession for allowing and supporting this highway medical robbery. Not of the profession but of themselves. At whose doors shall we lay the cause? The public of course will have to bear its part but they are to some extent excused on account of ignorance. The profession is responsible to some extent for not raising its voice more powerfully against this menace to public health but the press, that powerful organ for good or ill, will at the final judgment, have few sins more heinous to answer for than the crime of poisoning the minds of an unsuspecting public with what they know to be absolute lies. Papers, pamphlets and magazines almost upon every sheet upon which type is pressed is to some extent responsible for the success of these social vamdires. Even the Biclical Recorder and the N. C Christian Advocate, official orgens ot their respective churches for whose benefit they are said to be printed, are emblazened with "Mother's Friend," "Pink Pills for Pale People," "Cascara Candy," "The Electropoise," &c., &c.

Our profession by patient unpaid toil has sounded to the bottom most of the ills of life and have succeeded in devising means for preventing many, but all the knowledge is but small profit to those for whom it was gained because they have not been taught how to put into practice the wonderful discoveries wrought for their benefit. Dr. Shastid suggested in the April number of the Journal of the A. M. A. instruction of the laity through short concise yet clear and honest discussion of those subjects pertaining principally to Preventive Medicine, believing that such a course will tend to beget among the laity, more respect and veneration for and will bring them closer to physicians. It will also add impetus to the movement toward a creation of a department of public health, a milestone which all of us wish to see planted in our time.

The day has come when something must be done, we have struggled for centuries and have victory in our hands if we will but *act*, Shall we now in a fit of weary-

ness, tinctured with cowardice, throw away all that we have gained? Our heads and hearts are long enough and strong enough to devise ways and means by which our ignorant lay friends will cease to be devoured on account of their ignorance.

If as a profession we did but devote a tithe of our collective energy to the task of teaching humanity that we had something good for them, if we did but possess even a small portion of the persistent, tenacious perseverance of these quacks whom we condemn so strenuously, we could efface from this great nation much of the public ignorance.

We could soon show the laity the danger to health in placing their hard earned dollars into the coffers of these human vampires. True, the medical profession is to a great extent shut within itself. It has no power, no machinery as yet for reaching the public ear. The press, some might suggest, might help us by determination to print only truths so far as medical advertisements are concerned, but for the paltry pay of the advertiser it has sacrificed its honor, its self-respect, its decency, and most harmful of all, its veracity, for with eyes wide open they knowingly print advertisements worthy of the pen of Ananias. The uneducated, thoughtless, undiscriminating classes are loaded with almanacs, circulars, fictitious certificates and false promises of quacks and nostrum venders, which impress the credulous, unsuspecting mind and fill it with plausible falsehoods. The family physician is put aside, and his testimony against these frauds, if he has the manliness to denounce them, is attributed to his jealousy.

Heretofore, the profession has scorned to take up arms against these social lepers. When we can warn against such direful evil, is it beneath our dignity to teach the ignorant? There have been valuable suggestions made in current medical literature showing that general interest is being evoked on this subject. In several journals of late will be seen paragraphs taking the broad view that medicine should no longer be an occasionally useful mystery to the laity but, on the contrary, a living, continuously applied help to a higher civilization. There are advocates of public medical instruction, provided it is done in a proper way, paying special attention to practical methods of Preventive Medicines. Reacting, this instruction will beget greater respect for the physician in the every day affairs of life. It will make the practice easier and more successful, for when taught how we will find willing hearts and hands in the effort to save humanity as much as possible from all the ills which Preventive Medicine can blot out. Dr. Shastid's remarks are the outcome of wise thought. Why could we not here in North Carolina learn a bit from the business sagacity of the patent medicine mannfacturers and issue medical almanacs, conservative, concise, non-dogmatic, free from great detail, seriously, truthfully gotten up, yet popular and send them free to all. Let every County Medical Society have a medical bureau, with the local physician as the local agent, to instruct people in sanitary medical questions? We should do all in our power to get from the State a proper appropriation for its Board of Health. Legislators believe we do not care for help and they do not give it simply because by our inactivity we have merited such an opinion.

Verily there are a hundred medical duties we are leaving undone, which if we did but do, medical and sanitary progress would sweep on to certain victory. As physicians charged with the health of the present and future our duty must be clear.

The sly cunning of advertising schemers, the tricks and frauds of medical parasites, the patent medicine disgrace, all these must be choked out of existence. The careful instruction of the people, who are so woefully ignorant medically, could we but reach their ears, how we would love to appeal to them; to legislators of a serious honest type, if such there be, to the better class of journalists, to literary men with an eye to the public good, to teachers and rulers of colleges, to business men, to patriots and lovers of humanity, all these we would gladly have listen while we taught them something of their health, their life and their physical culture.

In these great United States hundreds and hundreds of thousands of needless deaths are annually taking place because the people will lend no helping hand to carry out the plans of prevention which have been so well established.

My lay friends, are your charlatans and quacks founding institutions of Preventive Medicine, are they trying to probe the mystery and prevent the mockery of disease? Has it been the quacks who have cared for the sick poor and kept going the great charity hospitals which fill our land today? Are you wise as a nation if as the old persecutors, you martyrize those who are your truest and most serviceable friends? For the sake of self-protection, for the sake of your children, for the sake of civilization and humanity, for God's sake, let us turn away from the foolishness and folly of such trifling and enter at last upon the road, removing every obstacle that leads to health.

Law vs. Justice.

By G. T. Sikes, M. D., Grissom, N. C.

From a scientific standpoint Law is reckoned as a subjective branch of science, while Medicine is classed as an objective branch.

But when the two combine the objective is consumed by the more potent factor and all then must be so fabricated as to stand a logical analysis, the offspring must be equal to the standard of the best parent.

Law in a broad sense, which cannot be discussed here, only in definition, is a rule of action, laid down or prescribed by a superior power for the protection of the good and the restraint of the bad; with one eye always gazing on justice and the other on the road that would lead hither but does not. Law is divided and sub-divided until after the Divine Law which itself is known by various names and divisions, and the laws of nature that enter into and control every thing in creation, from the heavenly bodies about their sister planets to the tiniest seed and plant: then another step we reach the laws of society, out of which grow the various divisions of civil law known separately as declaratory, remedial, penal, repealing, &c., the subject or science of which, taken collectively, makes jurisprudence, and this jurisprudence, coupled with the practice of medicine, makes the medical jurisprudence which we are here to consider. This branch of medicine has more formidable phases to the young than any other, because the medical profession is a brotherhood full of ethics and kind feelings, and not accustomed to that pertinent interrogatory and criticism that is so often tendered in irony and sarcasm from the learned bar.

Medical jurisprudence would naturally suggest its consideration under two great heads, viz.: The Laws now existing with their various deformities and the amendments required to entitle them to an equitable construction. Whatever may be the defect in the existing laws there is doubtless greater trouble arising from a want of a strict conformity to the demands of the same than from any defect in the language of the statutes themselves. Our statutes relating to the medical profession, as a whole, is possibly as good as could be expected, especially when we consider the short period that has elapsed since it was first suggested to the minds of the people at large that doctors needed any law whatever except what came indirectly through the various channels that affected mankind at large. Our State Board of Health, which should be the pride of our people, is doing a great work by the aid of its various auxillaries. Also good marine and inland sanitary regulations, with a law regulating the practice of medicine, which if properly and rigidly enforced, is possibly second to none; and much has been done by the way of legislation to prevent the spread of epidemics; in fact, it may be we have had a plenty if not too much legislation, it is not an unintelligible mass of class legislation and still-born laws that we need, but a few plain simple enactments that will bespeak the mental calibre of the age and people to the historian yet unborn.

In the infancy of progressive civilization rules were laid down for the control of every petty detail, but as science advanced it brought with it a gradual emancipation of such flimsy, awkward customs and gave birth to two factions, which were known as strict constructionists and liberal constructionists, the one holding rigidly to the words, the other to the meaning. But the days of construction have now passed, so far as we are concerned, and our statute books groan and sigh over offspring that gives notoriety to the grief stricken by an anual visit of the sheriff who demands with the high hammer of the law another ten dollars from both high, low, rich and poor; a legislative enactment as thoroughly destitute of prudence and charity, in the true sense, as can possibly be conceived.

The medical profession of North Carolina does not pose as an organization pleading for charity, for it is the parent of a charity which has been defined; as an unjust tax levied upon ability, energy and thrift by incompetence, indolence and shiftlessness; but this leach has come from a custom and grown into an unwritten or common law, from its birth being so remote that the memory of man runneth not to the contrary, but she simply asks that she may be left upon an equal footing with the variuos other arduous undertakings of life. The farmer has no specials to pay, the teacher has no extras to fork over, the mechanic has no encumbrance, the nostrum vender no restrictions laid around him, nor even the dude, nor tramp, are asked to apply the shoulder to the wheels of honest government and give a healthy momentum, still they have the full protection guaranteed by the constitution to every man of Life, Liberty, Property, and to worship God according to the dictates of conscience; bnt the every day heroes of the world, who have once paid for the privilege by satisfactory evidence to the law of a competency, and who sacrifice time, means and even life for suffering humanity, must build colleges and support institutions, erect monuments and

themselves go down unhonored beneath a burden of taxation.

As for the laws that demand correction, the unjust special tax on professional men should certainly be repealed. The State Treasurer's report shows that for the year 1896 there was collected from the doctors, dentists and lawyers of North Carolina, $18,790, which amount, allowing seventy cents on a hundred dollars worth of property would be equal to the tax on $2,684,285, making an unjust burden upon the class of men who, above all others, do more for the cause of humanity, in proportion to their ability, than any others. Roundly estimated there are about 1,500 licensed physicians in North Carolina who probably paid their special tax, amounting to $15,000; now supposing that this number of physicians do an amount of work that will make an average of $2,000 per capita it would make a grand total of $3,000,000 a year, of this, allowing fifty per cent. for loss and charity practice, (which is doubtless too large for our city brethren), it still leaves $1,500,000, which, added to the $15,000 paid in taxes, makes the handsome total of $1,515,000 that the medical profession of North Carolina bears in excess of an honest advalorum. But possibly the gravest defect in the laws bearing on medical justice is a want of a statute stating or implying that in scientific investigations none except men commensurate with the depth of the investigation shall be allowed to set in judgment on the case. This could not possibly be construed as an injustice to our neighbors and friends who otherwise would constitute the jury; in the first place the untutored mind cannot see as deep in a solid body as the educated, and in the second place, the opinions that float on the face of the waters are much more subject to be ensnared in the net of the wily professional than those of sufficient weight to root themselves in the stable foundations. I am not forgetful that any man on trial for a capital offence has a right to challenge a certain number of his countrymen who may be offered as jurors in the case pending, but yet this does not at all assure him that his destiny may not yet be entrusted to twelve men who can neither read nor write, and yet there are many men of this class who are much better judges of deep questions than some so-called scholars; yet we believe that there are cases in which nothing but scientific talent should be considered as competent jurors in the case. Take, if you please, the noted Maybrick case of Liverpool, which was detailed in the N. C. Medical Journal of February 6th, 1897, and consider the evidence in the case in question; first take a man of dissipated habits, in poor health, addicted to the use of arsenic and strychnia, and other tonics, put him on horseback in a drenching rain, and leave the April breezes to fan the saturated clothing dry, and what would you expect less than a chill on the day following? which called a physician, and later, the second physician, who enumerated among his symptoms: vomiting, pain, and burning in the stomach and bowels, thirst and great prostration, and was medicated by his anxious advisers with the following drugs as medicines, viz.: Sulphonal, cocaine, bismuth (double doses), nitro-glycerine, phosphoric acid, casava, Plumber's pills (containing antimony and calomel), prusic acid, antipyrine, jabor and chlorine, morphine. Fowler's solution of arsenic, bismuth and opium suppositories; the combined ingenuity and skill of several physicians, and to the surprise of those present, who are unacquainted with the case, this man died the fifteenth day of his illness; and immediately after his death two brothers brought the charge of murder against his wife, claiming that death was caused by arsenic administered by her, which claim they failed to substantiate, but by chemical analysis Mr. Davis reported one-fiftieth of a grain of arsenic found in the liver, nothing in the stomach or its contents and traces not weighable in the intestines.

Upon this threadbare flimsy tissue braced by two brothers, bitter enemies, this poor woman was brought in open court and tried and convicted of the murder of her husband, who had himself ascribed the beginning of his illness to an over dose of strychnine which he had taken fifteen days previous to his death. Now had the jury in question been composed of the witnesses themselves instead of bakers, plumbers and laborers to whom the evidence was a mass of mystery and contradiction, the verdict would have been quite different. Another much needed law is a statute regulating the manufacture and sale of nostrums. As it now stands so far as I am aware there is no tax on the thousand and one king-cure-alls sold at random and recommended with impunity all over our state, and indeed does this nostrum business afford such allurements that moonshiners have taken advantage of the opportunity and bottle their plutonian fire scorched nepenthe and lable it in attractive type "Ginger Tonic," &c., a fraud upon the government and a slander upon the medical profession. Our legislature in years past thought it wise to enact a statute for the protection of agriculturists who might buy fertilizer for their cotton or tobacco and in keeping with said law require each brand of commercial guano to be analyzed and the

formula published for the protection of the people against fraud.

And not only this but our law requires the farmer shall be acquainted with the age of the seed that are offered to plant his farm or garden and as such require that the package shall bear the date of the growth of such seed. These are wise and commendable laws but how careful are men sometimes to scrutinize about minor things and overlook major matters. What legislature has passed a law demanding that the thousand and one patent nostrums and proprietary humbugs shall have their formular printed and attached to the wrapper or box, or who has thought it wise and just while he is building his reputation as a lawmaker to suggest that the depraved minds and appetites and stomachs be protected against the cunning of money sharks and thieves who vampire like live at the cost of the lives of their fellowmen. It is a fact that men who never saw within the walls of a medical college nor read the preface to a Materia Medica have put up teas and sold them under a guarantee: "No Cure, No Pay," and our friends the druggists linger long, and tardily learn that they are not licensed to practice medicine, but to compound the same; and not only druggists but nearly every cross roads merchant has a fantastic array of blended colors showing that he too is an auxilary to the quack who gives him fifty per cent. of all he can extort from the ignorance of his patronage and recommends his medicines as superior to the skill of the licensed physician in the community and so long as he correctly labels his articles and no one is sacrificed by his blunders he goes on unmolested. There is several other subjects that should engage the attention of the law making powers, such as an institution for the care of the idiotic so as to control them and have them taught to work so they may not be a burden to the state, and cared for in a state of celibacy, lest they transmit a like trouble and kindred afflictions to posterity; and time would doubtless save untold misery and affliction could a like application be made to that unfortunate class whose glands have been inoculated by the king of germs (*Syphilis*). It is a subject of great importance that there should be a standard of qualification for the midwives that go to and fro all over the country often times not only prac icing their art but posing as experimental practitioners and surgeons. In conclusion, which now suggests the time proper, there is one point that surely should engage the mind of every Medical man and that is forensic medicine proper; this is the crucial test by which a man is often measured yet is not always an impartial judge; but the first thing in every case is, to thoroughly acquaint oneself with the subject under consideration, and second, is to tell what you know to be true and enough to satisfy the demand and no more. With these credentials no man need shudder because he is made an object of conspicuity, nor need he fear to meet the cross examination that so often contradicts the witness and completely riddles his entire testimony, but David Crocket's maxim "Know you are right and go ahead," will anchor any young man safe in the harbor of success. It was the boast of Augustus that he found, "Rome of brick and left it of marble," but how much nobler will be the sovereign's boast when he shall have it to say: that he found forensic medicine dear and left it cheap, found it a sealed book, left it a living letter; found it the patrimony of the rich, left it the inheritance of the poor; found it the two edged sword of craft and oppression, left it the staff of honesty and the shield of innocence.

A New Treatment of Hydrophobia--Report of a Case—Recovery.†

By J. B. H. Knight, M. D., Williamston, N. C.

For some time, or since the discovery of Permanganate of Potassium as an antidote for morphine, I have been thinking over the extension of the use of this Drug, and reasoning to myself thus: If Permanganate of Potassium has the power through its powerful affinity for Oxygen, to tear to pieces morphine, a vegetable poison, composed of carbon hydrogen, oxygen, etc., rendering it inert, why should it not exert the same influence over all poisons of a like nature, is composed of the the same elements—carbon, hydrogen, oxygen, etc?

That so much faith in this remedy—pinning my faith to its powerful affinity for oxygen, that I determined to try it on the cases of this class as they presented themselves. I include in this class of cases all those arising from either Animal or Vegetable poisons, such as Hydrophobia, Tetanus, Stings of Insects, Snake Bites, Morphine, Atropine, etc.,

My first experiment was some two years ago in the case of a Spider bite. The case was that of a woman 40 years of age, who had been bitten by a spider several hours before I was called. Found her in intense pain and on the verge of convulsions. Her arm very much swollen and quite red. I at

†Read before the North Carolina Medical Society, at Morehead City, June 8th, 1897.

once gave her about 3 grs. of Permanganate of Potassium hyperdermically, and left her a solution of the drug to take per orem every two hourt in the same dose. The arm gave considerable pain for two or three days, and had to have an occasional poultice, but she came around all right in a short while, and no other drug was used. This gave encouragement to my theory.

On the night before I was called to the case I am about to relate, which was in the early part of the month of Feb. '97, I was in conference with Dr. Harrell of this place, and Dr. Baker of Tarboro, and in the course of our conversation we came around to the subject of treating this class of cases, when I advanced my theory of applying this old remedy to this class, told them as the authors all put down Hydrophobia as hopelessly incurable, I ran no risk in trying it. They agreed with me, and advised it.

Next day a messenger came for me in a hurry, to go seven miles in the country, to see a girl 13 years old, who he said had run mad. It was raining (just pouring down) but I was there in 35 minutes. Found the girl lying on a sheep-skin on the carpet, in the hardest kind of convulsions, with three strong men holding her. She was trying her best to bite them, and when she could not bite, would spit at them. Was foaming at the mouth and was constantly spitting at those around her. These convulsions would last from three to five minutes, with an interval of two to three minutes between.

In the interval her mind was clear, and she would beg them to not let her bite them. The convulsions would come on with halucinations—she seemed to see a little dog,and would exclaim, "There comes that little black dog," and kept repeating it. She had a wild stare in her eyes, and a distressed countenance.

The pulse was small, quick and hard. The mucous membranes quite red, pupils dilated, no fever, but skin cold and clammy. When asked if she had been bitten by a dog recently, she replied yes; she was bitten last fall while at Mr. Green's. When asked where she was bitten at, she placed her hand on the outer and upper part of her right thigh, and said, "here." When I looked she showed a well marked scar on the spot where she placed her hand—the scar being under her clothing. The history of the case is this: Three years ago she was bitten by a dog, and no one knows whether the dog was mad or not. Last fall she was bitten by this little dog of Mr, Green's, but the dog was killed a few days later while after s sheep. The bite got well without any treatment. The girl got along without any trouble until two days before she was taken with these convulsions, when she commenced complaining of feeling badly. Head ached and limbs ached. These feelings grew worse until the morning she was taken, she got up and went out to assist in getting breakfast, but complained so that Mrs. Rogers told her to go back to her room, and go to bed. She started back to her room, and on the way she was taken with the halucinations which developed so strongly later. She seemed to see the dog, and ran with all her might.

A young man from the neighborhood happened to be coming into the yard at the time, when she went for him, to bite him. He ran for his might and got over the fence. While she could talk,and kept constantly at it, there seemed to be a spasm in the muscles of the throat, which caused her often to utter strange sounds, hard to describe, in some instances resembling the bark of a dog. They got her into the house and did everything they could, or knew how, to quiet her, but she grew constantly worse. It required a strong man to her hands, one to her feet and another to her head, and these soon grew tired and had to be relieved. Thus matters were going on when I arrived about half past 12 o'clock.

I began treatment hy administering chloroform. The convulsions at this time were very violent. I brought her completely under the chloroform, and began to fix my dose of Permanganate of Potassium to give her hypodermically; but before I could get it ready she was off in another convulsion. I got it ready, and again gave the chloroform to complete narcosis, when I gave the permanganate. I kept up the chloroform for some minutes, to give the dose time to become absorbed.

In about a half on hour I stopped the chlorofoform and let her come to. She was perfecily conscious and quiet, and talked a great deal; and told us all about the dog biting her. (I had neglected to state that this girl is a poor girl and had only been in this home, which is several miles from her former home, six weeks, and the family knew nothing about her having been bitten.) She soon grew chilly and began shivering. We threw a cover over her, but she kept up her shivering, so I told Mrs. Rogers we had better get her into her bed. We put her in bed, and in a few minutes she had a convulsion. I gave the chloroform and fixed a dose for her to take by the mouth, as soon as the convulsion stopped and without putting her completely under the chloroform. I gave her the dose to drink. She drank the dose (about 5 grains disuolved in water), at about three gulps, and immediately went off into a severe convulsion. I

then put her completely under chloroform, and kept her so for several minutes, and she went off off into a quiet sleep. I stayed until aboat three o'clock and she was still sleeping.

I fixed and left her medicine to take every two hours, and left chloroform to administer, should she have convulsions again. Kept a constant watch by her and gave the medicine every 2 hours. But after a few doses had been given, she grew sick at stomach, and vomited up the medicine several times during the night. But did not have any more convulsions until next morning a little later than they began the day before; when her attendant gave her the chloroform, after which she retained her medicine again, and did not have any more convulsions until next day, still a little later, when she had one, very slight one, and did not have any more at all. On the second day, at 12 o'clock, I found her with a high fever, temp. 103 or 104 F, (I guess tbe temp. as I did not have a thermometer to throw away at that time) pulse 120, full and strong, pupils dilated as large as a buck shot, notwithstanding there was plenty of light in the room, tongue very red and swollen so as to completely fill up the mouth, the right leg was swollen and very painful, could not bear any weight on it, and a violent headache. I now put her doses of Permanganate to 4 hours apart, and gave a full dose of calomel and rhubarb, and a capsule of quinine and acetanilid (3 grs. each) between the other doses. Next day at 12 o'clock the fever was decidedly less, tongue less swollen and pain in leg less. She was better in every way. Kept up the same treatment. Next day the fever and swelling were gone, headache gone, and soreness in leg nearly gone. Kept up the same treatment another day. After this the capsules were stopped, but kept her taking the potassium salt for 12 days. She made a complete and uninterrupted recovery, and up to the present time is doing well.

I have been asked since, Doctor do you think it was a genuine case of Hydrophobia? My reply is, I think it was, and surely if it was not Hydrophobia I do not know what it was. I have read everything I can get on the subject since, and it fills the discription, and certainly is not like any other case of convulsions I ever saw before.

DISCUSSION.

DR. HARRIS.—After hearing the paper, without having seen the patient, I would like to know if it could not have been hysteria. There has been a recent hydrophobia scare or epidemic in my own section, and in a family living about a mile from town, there developed some very strange symptoms. The children became affected with dancing knee, they would all bark and snap like dogs, they would jump on the table and on the mantel piece, and turn double summersaults, and fall on the floor and have convulsions. They had some of the same symptoms he mentions.

DR. O'HAGAN.—Hysteria assumes ten thousand different forms, and sometimes it is over the whole country. You know in the Middle Ages these hysterics were looked upon with respect, and people were supposed to be under the influence of some Divine inspiration, but we have learned better, and have learned to recognize the symptoms of hysteria. I would respectfully doubt Dr. Knight's diagnosis of hydrophobia. First of all the evidences are wanting to verify the diagnosis. It is a well known fact that hydrophobia may occur at any time after a person is infected. I know of one case where it occurred in a man 21 years after he was bitten. The fact that the girl was bitten by a dog does not prove anything, does not prove that the dog was rabid, and then the symptoms following could be doubted, and there is no case on record where there has been a recovery. I sat by the side of a poor negro who was bitten and watched him from the incipiency of the disease until he died. All these popular symptoms were wanting. He never exhibited any signs of biting, etc., but drank with avidity and without any attack. While the case is very interesting, still I doubt the diagnosis.

The Keystone of the Medical Arch.†

By T. S McMULLAN M.D., Hertford, N. C.

The rule usually followed by chairmen of sections I shall in some measure break. The purpose being to offer to your mind some suggestions why practitioners of medicine should have a more accurate knowledge of physiology than generally obtains, rather than to present an array of facts which most of us have had an opportunity of knowing whether we have availed ourselves of it or not.

In physiology few facts of importance have been established.

BLOOD AND CIRCULATION.—An investigation of Littlefields has shown that the nucles of leucocytes and lymphocytes contain a compound neucleohiston formed itself into two substances, which contributes largely to the coagulating of blood.

†Read before the North Carolina Medieal Society at Morehead City, June 8, 1897.

When studying the effect of bleeding, Jona has deduced that the alkalinity of the plasma is at its maximum reduction in two hours and returns to its normal in about twenty-four hours; and that about the seventh day after a hemmorage the greatest activity is seen in the spleen and red marrow.

Experiments have shown that gravity is a cardinal factor in dealing with the circulation; and that in man the equilibrium is maintained by the splanchnic vasomotors. Consequently when this comparison has been destroyed or injured, position is important.

Mosso has described a sphy quomate: for determining blood pressure which promises to be practical and convenient for the general practitioner.

That an increased flow of blood through the muscles takes place during and after massage has been clearly proven.

Respiration.—That blood from an asphyxiated animal has more toxic properties than normal blood has been shown.

Nutrition.—It has been demonstrated that glycolysis (or destruction of grape sugar) is not dependent upon the presence of the fibrien factors as originally supposed, but is a function of the formed elements of the blood and is an act of oxidation.

Corvallo has proved that in some of the lower animals perfect digestion takes place, even when the stomach is removed,

Ductless Glands.—It has been made positive that the spleen is connected with the formation of red blood corpuscles, and that its removal in old people is attended by a very marked anæmia.

Oliver and Schafer contend that the suprarenal capsules contain a principle which aids in maintaining tone in the different kinds of muscular tissue; and that their removal causes general muscular weakness and vaso motor disturbances.

Central Nervous System.—It has been shown that the temperature of the brain can be raised 2 to 3 degrees above that of the blood by stimulation and excitement. Mosso states that sleep is entirely a chemical phenomena as the circulation cannot become modified to any great extent we can awake and think: thus contending that anæmia of the brain cannot be the causes but is only an incident.

It has been shown that a median vertical section of the Cerebellum gives no results. So that it is plain that its functional connections are on the same side of the body; removal of either side causing incordination,

The only reference I shall make to chemistry here, Mr. President, is to call your attention to the almost countless numbers of new remedies evolved from the laboratories of the world, and to present a few tests to be used in urinalysis which have seemed to come worthy of remembrance and use.

Ott advises the use of sulphosalicylic acid in testing for albumen: added either in crystals or in 30 (30) per cent. solution it produces a cloudiness, even if the smallest amount be present.

Carres recommends the use of resoercin as a reagent to determine the presence of albumineuria; both of these tests have been found to be more aocurate than the ones heretofore in general use.

In regard to the qualitative tests for sugar after using all that I have seen proposed, none have seemed so satisfactory in ordinary practice as Trommers or Fehlings and for quantitative analysis Whitneys is the most useful and practical.

The volumetric on Whitneys test is; a solution of alum, cupric sulphate of which one drachm is discolorized by 1.30 of plucass. The urine added drop by drop will upon boiling if sugar be present discolorize the solution and by a carefully arranged table the quantity can be estimated.

I have been content Mr. President, merely to enumerate some of the more practical advances during the past current year, and I shall leave to your leasure and your inclination the task of elaborating and to your research and knowledge, the preference of believing or rejecting them.

The history of medicine began, gentlemen of the society, when Egypt was the queen of civilization; for we find it recorded in the book of Moses that the priests exercised the art of healing, and so attempt to solve the two greatest problems given to man since the world began; the salvation of the soul and the cure of the body.

The art was introduced into Greece by Chiron and Hippocrates formulated the first system of treatment; that based only upon false deductions and dogmatic teachings. And so on down the ages certain medicine were given for certain diseases; and not that their actions were understood, but because they had been supposed to have cured others; they had in those days books and scientists and teachers, but yet they were like

"The bookful blockhead, ignorantly read,
With loads of learned lumber in his head,"

and medicine only began to be put upon a rational basis when in sixteen hundred and twenty-eight the discovery of the circulation of blood was given to the world.

It is is said that great events occur in clusters; that the greatest minds shine together. It was during the great upheavels

in England in the sixteenth century, amid the clamors ot the people when brother was arrayed against brother, when church hurled its anathemas at the puritans, and the puritans their denunciations against the church, when events arose which terminated in the din of the arms; that at Marston Moor shook the house of Stuart from the throne, that the great fact was given out that there were four humors, as Galen had taught, but that one which was the elixir of life. This discovery of a physiological fact has revolutioned the practice of medicine and has made the name of Harvey immortal.

From then until now, upon the researches made by the psysiologists hangs our ability to mediate. It is the keystone of the Medical Arch; the bed-rock of our therepeusis, the knowledge of which has been the power which more than any other has driven out from civilization the heinous practices and beliefs in witchcraft; and will be the power which more than any other in the days to come, as the laity becomes familiar with the intricate and beautiful economy of man's make up and learns to know that it is safe only under the guidance of one versed in these things will sweep away all quackery and charlatanism. I should like to plead right here for a more urgent insistence by our physicians upon the importance of having our children instructed in this branch; it is essentially the science which belongs to both laymen and professional, the knowledge of it its more exact details is for those whose duty is to direct in their proper channel all those bodily functions which have gone astray but its acquaintance with all men leads him to a heightened opinion of themselves and a more profound reverence for that mighty power to whom they owe their being.

Chemistry is the closely allieds ister of physiology. The human body is one great physiology. The human body is one great and intricate laboratory and life one series of chemical changes. New tissues are being formed and old ones which have served their purpose, and which for a time have made the cycle of life revolve are cast away. Upon these and upon the direction of these in the groves marked out for them by the hand of omnipitence hangs our hope of living in this world,

Mr. President, I trust I am free from cant when I say that I do not believe, with no knowledge of handiwork and with only the purpose to impose himself upon unsuspecting sufferers for the sake of grain, dares meddle with the health of his creatures, made in his image and into whom He breathed the breath of life. No man at the present day can render as his excuse a lack of opportunity to know; if no other means presented the easy access which we have to the current medical Journals would enable all of us to learn. Those of the profession in this State, who have their heart in the work of healing, should see to it that the people so far as they can help it shall not be made the victim of wilful neglect and preventable unfitness.

We have not yet reached the culmination of physiological research. The day is coming when all of us will be able to have a nearer and better view of his and his fellowmans makeup; but because we do not see the need let us not have less faith in our art, but inquire ourselves to see if, even in our limited fields we may discern something which will add to man's hope of living.

The great in war have their monuments; the great in peace their honors, and the great in verse have had woven about their memories chaplets of praises wrought from their own sweet songs. But meagre has been the homage paid to keep fragrant the memory and to keep green the graves of that army of men who have toiled and delved, that they might make, not themselves great, but us more able to cope with that enemy which was thrust upon us when Adam fell. Mr. President I have great faith in the future of our act, and I believe that the day has dawned which will give to the laborers in physiological science their need of praise. And as the day grows older and the "Science of Life" more exact, we will hear the voice of the people say (except the great arch enemy) "Medicine is King, long live the king."

From the Case Book of a General Practitioner.

Dr. H. C. Shuttee, of West Plains, Mo., in a paper entitled "From the Case-Book of a General Practitioner," reported several interesting cases.

Case 1.—Was one of membranous croup in a child, age 3 years, with whooping cough. On the third day trachetomy was performed. The cough was violent and secretions abundant and viscid, they were forced up by the side of the tube and caused great swelling of the tissues of the neck, so that the tube soon became too short to reach the trachea. Hooks made of gold-plated wire loops were used to keep trachea open. These were 1⅝ inch long, and were worn 3 weeks. It was over a month before wound was closed. A spray of sod. bicarb. sol. and ess. pancreas was used to liquify secre-

tions, and was very effective. The internal treatment consisted of bichloride mercury, iron, etc., and small doses of antipyrin for pertussis. This was in pre-antitoxin days.

Case 2.—A youth, age 18, was attacked with slight diarrhœa after overwork, and in his absence another physician was called, who prescribed astringents and opium to check diarrhœa. He lingered along for a week, being up and down, till severe symptoms of poisoning from absorption of toxic products from the intestine set in and when he saw him on the 8 days was in a state of collapse. He attributed his death to auto-intoxication from the intestines, The doctor alluded to the importance of a recognition of intestinal auto-intoxication, the important function of the liver in destroying them, and the great necessity of assisting nature in getting rid of the offending material instead of preventing the success his efforts by opium, etc. He also adverted to the important researches of Kühne in the physiological chemistry of the peptones, and the possible source of poisoning by improper transformation of them in the small intestines.

Case 3.—This was a case of poisoning by bromoform in a girl 8 years old, with pertussis. He had ordered a 3 oz. mixture of alcohol, syrup and water containing 50m. bromoform, to be shaken and a teaspoonful given every 3 hours during the day and at at night if cough was severe. In half an hour after taking last dose she became comatose, respiration and pulse very irregular, pupils dilated. Breathing became so bad that artificialon respiratihad to be practiced for five minutes. Strychnia and digitalis hypodermically restored her.

He alluded to cases reported by Guntermann (Am. Tr. Bk. M. & S., 1896), of bromoform poisoning in which pupils were normal, and respiration and pulse were not affected.

Case 4.—A young man with syphilis and pulmonary tuberculosis had fistula-in-ano which had been twice unsuccessfully operated on by another surgeon. It was causing great pain and patient was very much debilitated. The rectal mucous membrane was undermined for 3 inches. The first operation was not successful because two indurated lines leading into buttock were not removed; at a subsequent operation, two months afterwards, these were laid open and removed and he made a good recovery. Has gained 30 pounds and is now at work. The doctor asked if there was any antagonism between siphyllis and tuberculosis.

Case 5.—This was a case of erythema multiform in a girl aged 17, in which there was very great swelling of hands, feet and face, urine was scanty and contained brick-dust deposit. She resisted all treatment, which was mainly ellimitative,until she was put on a milk diet, bicarb. potash and liq. fero-salicyl, when she began slowly to improve and finally, in 3½ months, recovered, an unusually long time, as most cases recover in from 2 to 4 weeks.

Case 6.—In this case, that of a widow aged 24, a chronic pneumonic consolidation of the lower lobes of both lungs with thickened plura, was mistaken by himself and another physician for double pyothorax. All the physical signs of pyothorax, including suppression of the whispered voice, were present, and she had chills, high fever, profuse perspiration, etc. She had severe pain and an exceedingly distressing cough. She was chloroformed and it was intended to resect one or more ribs on both sides, but as a large aspirating needle thrust repeatedly into each side did not locate pus, no operation was done. To his surprise she began to improve, the cough stopped completely, and she soon got well.

The doctor asked:

1. What was the exact pathological condition?

2. Are such mistakes in diagnosis common, or was it merely the result of our stupidity?

4- What relieved her, the chloroform,the puncture, or both?

4. In a similar case, where the diagnosis of consolidated lung and thickened plura was positively made out, resisting all other treatment, would we be justified in chloroforming and puncturing the lung?

The Warm Bath for Abdominal Palpation.

The hot bath has long been used for the reduction of strangulated and incarcerated hernias, for the relaxation of spasm associated with urethral stricture, or with the passage of renal or biliary calculi. It seems probable that in various questions of diagnosis in abdominal affections the bath might likewise be of service. Everyone has experienced how difficult it may occasionally be even with moderate chloroform and ether narcosis to obtain the complete relaxation of the abdominal walls necessary for the proper palpation of the viscera. At all vents, an attempt by palpation in the hot bath might be first attempted in many cases. Schuster recommends this method for palpation of the liver, kidney, gall-bladder, abdominal tumours, etc., in difficult cases. In a recent case we were easily able to palpate the spleen by this method, though previously we failed to feel it.

Law vs. Justice.

By G. T. Sikes, M. D., Grissom, N. C.

From a scientific standpoint Law is reckoned as a subjective branch of science, while Medicine is classed as an objective branch.

But when the two combine the objective is consumed by the more potent factor and all then must be so fabricated as to stand a logical analysis, the offspring must be equal to the standard of the best parent.

Law in a broad sense, which cannot be discussed here, only in definition, is a rule of action, laid down or prescribed by a superior power for the protection of the good and the restraint of the bad; with one eye always gazing on justice and the other on the road that would lead hither but does not. Law is divided and sub-divided until after the Divine Law which itself is known by various names and divisions, and the laws of nature that enter into and control every thing in creation, from the heavenly bodies about their sister planets to the tiniest seed and plant: then another step we reach the laws of society, out of which grow the various divisions of civil law known separately as declaratory, remedial, penal, repealing, &c., the subject or science of which, taken collectively, makes jurisprudence, and this jurisprudence, coupled with the practice of medicine, makes the medical jurisprudence which we are here to consider. This branch of medicine has more formidable phases to the young than any other, because the medical profession is a brotherhood full of ethics and kind feelings, and not accustomed to that pertinent interrogatory and criticism that is so often tendered in irony and sarcasm from the learned bar.

Medical jurisprudence would naturally suggest its consideration under two great heads, viz.: The Laws now existing with their various deformities and the amendments required to entitle them to an equitable construction. Whatever may be the defect in the existing laws there is doubtless greater trouble arising from a want of a strict conformity to the demands of the same than from any defect in the language of the statutes themselves. Our statutes relating to the medical profession, as a whole, is possibly as good as could be expected, especially when we consider the short period that has elapsed since it was first suggested to the minds of the people at large that doctors needed any law whatever except what came indirectly through the various channels that affected mankind at large. Our State Board of Health, which should be the pride of our people, is doing a great work by the aid of its various auxillaries. Also good marine and inland sanitary regulations, with a law regulating the practice of medicine, which if properly and rigidly enforced, is possibly second to none; and much has been done by the way of legislation to prevent the spread of epidemics; in fact, it may be we have had a plenty if not too much legislation, it is not an unintelligible mass of class legislation and still-born laws that we need, but a few plain simple enactments that will bespeak the mental calibre of the age and people to the historian yet unborn.

In the infancy of progressive civilization rules were laid down for the control of every petty detail, but as science advanced it brought with it a gradual emancipation of such flimsy, awkward customs and gave birth to two factions, which were known as strict constructionists and liberal constructionists, the one holding rigidly to the words, the other to the meaning. But the days of construction have now passed, so far as we are concerned, and our statute books groan and sigh over offspring that gives notoriety to the grief stricken by an anual visit of the sheriff who demands with the high hammer of the law another ten dollars from both high, low, rich and poor; a legislative enactment as thoroughly destitute of prudence and charity, in the true sense, as can possibly be conceived.

The medical profession of North Carolina does not pose as an organization pleading for charity, for it is the parent of a charity which has been defined; as an unjust tax levied upon ability, energy and thrift by incompetence, indolence and shiftlessness; but this leach has come from a custom and grown into an unwritten or common law, from its birth being so remote that the memory of man runneth not to the contrary, but she simply asks that she may be left upon an equal footing with the variuos other arduous undertakings of life. The farmer has no specials to pay, the teacher has no extras to fork over, the mechanic has no encumbrance, the nostrum vender no restrictions laid around him, nor even the dude, nor tramp, are asked to apply the shoulder to the wheels of honest government and give a healthy momentum, still they have the full protection guaranteed by the constitution to every man of Life, Liberty, Property, and to worship God according to the dictates of conscience; bnt the every day heroes of the world, who have once paid for the privilege by satisfactory evidence to the law of a competency, and who sacrifice time, means and even life for suffering humanity, must build colleges and support institutions, erect monuments and

themselves go down unhonored beneath a burden of taxation.

As for the laws that demand correction, the unjust special tax on professional men should certainly be repealed. The State Treasurer's report shows that for the year 1896 there was collected from the doctors, dentists and lawyers of North Carolina, $18,790, which amount, allowing seventy cents on a hundred dollars worth of property would be equal to the tax on $2,684,285, making an unjust burden upon the class of men who, above all others, do more for the cause of humanity, in proportion to their ability, than any others. Roundly estimated there are about 1,500 licensed physicians in North Carolina who probably paid their special tax, amounting to $15,000; now supposing that this number of physicians do an amount of work that will make an average of $2,000 per capita it would make a grand total of $3,000,000 a year, of this, allowing fifty per cent. for loss and charity practice, (which is doubtless too large for our city brethren), it still leaves $1,500,000, which, added to the $15,000 paid in taxes, makes the handsome total of $1,515,000 that the medical profession of North Carolina bears in excess of an honest advalorum. But possibly the gravest defect in the laws bearing on medical justice is a want of a statute stating or implying that in scientific investigations none except men commensurate with the depth of the investigation shall be allowed to set in judgment on the case. This could not possibly be construed as an injustice to our neighbors and friends who otherwise would constitute the jury; in the first place the untutored mind cannot see as deep in a solid body as the educated, and in the second place, the opinions that float on the face of the waters are much more subject to be ensnared in the net of the wily professional than those of sufficient weight to root themselves in the stable foundations. I am not forgetful that any man on trial for a capital offence has a right to challenge a certain number of his countrymen who may be offered as jurors in the case pending, but yet this does not at all assure him that his destiny may not yet be entrusted to twelve men who can neither read nor write, and yet there are many men of this class who are much better judges of deep questions than some so-called scholars; yet we believe that there are cases in which nothing but scientific talent should be considered as competent jurors in the case. Take, if you please, the noted Maybrick case of Liverpool, which was detailed in the N. C. Medical Journal of February 6th, 1897, and consider the evidence in the case in question; first take a man of dissipated habits, in poor health, addicted to the use of arsenic and strychnia, and other tonics, put him on horseback in a drenching rain, and leave the April breezes to fan the saturated clothing dry, and what would you expect less than a chill on the day following? which called a physician, and later, the second physician, who enumerated among his symptoms: vomiting, pain, and burning in the stomach and bowels, thirst and great prostration, and was medicated by his anxious advisers with the following drugs as medicines, viz.: Sulphonal, cocaine, bismuth (double doses), nitro-glycerine, phosphoric acid, casava, Plumber's pills (containing antimony and calomel), prusic acid, antipyrine, jabor and chlorine, morphine. Fowler's solution of arsenic, bismuth and opium suppositories; the combined ingenuity and skill of several physicians, and to the surprise of those present, who are unacquainted with the case, this man died the fifteenth day of his illness; and immediately after his death two brothers brought the charge of murder against his wife, claiming that death was caused by arsenic administered by her, which claim they failed to substantiate, but by chemical analysis Mr. Davis reported one-fiftieth of a grain of arsenic found in the liver, nothing in the stomach or its contents and traces not weighable in the intestines.

Upon this threadbare flimsy tissue braced by two brothers, bitter enemies, this poor woman was brought in open court and tried and convicted of the murder of her husband, who had himself ascribed the beginning of his illness to an over dose of strychnine which he had taken fifteen days previous to his death. Now had the jury in question been composed of the witnesses themselves instead of bakers, plumbers and laborers to whom the evidence was a mass of mystery and contradiction, the verdict would have been quite different. Another much needed law is a statute regulating the manufacture and sale of nostrums. As it now stands so far as I am aware there is no tax on the thousand and one king-cure-alls sold at random and recommended with impunity all over our state, and indeed does this nostrum business afford such allurements that moonshiners have taken advantage of the opportunity and bottle their plutonian fire scorched nepenthe and lable it in attractive type "Ginger Tonic," &c., a fraud upon the government and a slander upon the medical profession. Our legislature in years past thought it wise to enact a statute for the protection of agriculturists who might buy fertilizer for their cotton or tobacco and in keeping with said law require each brand of commercial guano to be analyzed and the

formula published for the protection of the people against fraud.

And not only this but our law requires the farmer shall be acquainted with the age of the seed that are offered to plant his farm or garden and as such require that the package shall bear the date of the growth of such seed. These are wise and commendable laws but how careful are men sometimes to scrutinize about minor things and overlook major matters. What legislature has passed a law demanding that the thousand and one patent nostrums and proprietary humbugs shall have their formular printed and attached to the wrapper or box, or who has thought it wise and just while he is building his reputation as a lawmaker to suggest that the depraved minds and appetites and stomachs be protected against the cunning of money sharks and thieves who vampire like live at the cost of the lives of their fellowmen. It is a fact that men who never saw within the walls of a medical college nor read the preface to a Materia Medica have put up teas and sold them under a guarantee: "No Cure, No Pay," and our friends the druggists linger long, and tardily learn that they are not licensed to practice medicine, but to compound the same; and not only druggists but nearly every cross roads merchant has a fantastic array of blended colors showing that he too is an auxilary to the quack who gives him fifty per cent. of all he can extort from the ignorance of his patronage and recommends his medicines as superior to the skill of the licensed physician in the community and so long as he correctly labels his articles and no one is sacrificed by his blunders he goes on unmolested. There is several other subjects that should engage the attention of the law making powers, such as an institution for the care of the idiotic so as to control them and have them taught to work so they may not be a burden to the state, and cared for in a state of celibacy, lest they transmit a like trouble and kindred afflictions to posterity; and time would doubtless save untold misery and affliction could a like application be made to that unfortunate class whose glands have been inoculated by the king of germs (*Syphilis*). It is a subject of great importance that there should be a standard of qualification for the midwives that go to and fro all over the country often times not only prac icing their art but posing as experimental practitioners and surgeons. In conclusion, which now suggests the time proper, there is one point that surely should engage the mind of every Medical man and that is forensic medicine proper; this is the crucial test by which a man is often measured yet is not always an impartial judge; but the first thing in every case is, to thoroughly acquaint oneself with the subject under consideration, and second, is to tell what you know to be true and enough to satisfy the demand and no more. With these credentials no man need shudder because he is made an object of conspicuity, nor need he fear to meet the cross examination that so often contradicts the witness and completely riddles his entire testimony, but David Crocket's maxim "Know you are right and go ahead," will anchor any young man safe in the harbor of success. It was the boast of Augustus that he found, "Rome of brick and left it of marble," but how much nobler will be the sovereign's boast when he shall have it to say: that he found forensic medicine dear and left it cheap, found it a sealed book, left it a living letter; found it the patrimony of the rich, left it the inheritance of the poor; found it the two edged sword of craft and oppression, left it the staff of honesty and the shield of innocence.

A New Treatment of Hydrophobia--Report of a Case—Recovery.†

By J. B. H. Knight, M. D., Williamston, N. C.

For some time, or since the discovery of Permanganate of Potassium as an antidote for morphine, I have been thinking over the extension of the use of this Drug, and reasoning to myself thus: If Permanganate of Potassium has the power through its powerful affinity for Oxygen, to tear to pieces morphine, a vegetable poison, composed of carbon hydrogen, oxygen, etc., rendering it inert, why should it not exert the same influence over all poisons of a like nature, is composed of the the same elements—carbon, hydrogen, oxygen, etc?

That so much faith in this remedy—pinning my faith to its powerful affinity for oxygen, that I determined to try it on the cases of this class as they presented themselves. I include in this class of cases all those arising from either Animal or Vegetable poisons, such as Hydrophobia, Tetanus, Stings of Insects, Snake Bites, Morphine, Atropine, etc.,

My first experiment was some two years ago in the case of a Spider bite. The case was that of a woman 40 years of age, who had been bitten by a spider several hours before I was called. Found her in intense pain and on the verge of convulsions. Her arm very much swollen and quite red. I at

†Read before the North Carolina Medical Sciety, at Morehead City, June 8th, 1897.

once gave her about 3 grs. of Permanganate of Potassium hyperdermically, and left her a solution of the drug to take per orem every two hourt in the same dose. The arm gave considerable pain for two or three days, and had to have an occasional poultice, but she came around all right in a short while, and no other drug was used. This gave encouragement to my theory.

On the night before I was called to the case I am about to relate, which was in the early part of the month of Feb. '97, I was in conference with Dr. Harrell of this place, and Dr. Baker of Tarboro, and in the course of our conversation we came around to the subject of treating this class of cases, when I advanced my theory of applying this old remedy to this class, told them as the authors all put down Hydrophobia as hopelessly incurable, I ran no risk in trying it. They agreed with me, and advised it.

Next day a messenger came for me in a hurry, to go seven miles in the country, to see a girl 13 years old, who he said had run mad. It was raining (just pouring down) but I was there in 35 minutes. Found the girl lying on a sheep-skin on the carpet, in the hardest kind of convulsions, with three strong men holding her. She was trying her best to bite them, and when she could not bite, would spit at them. Was foaming at the mouth and was constantly spitting at those around her. These convulsions would last from three to five minutes, with an interval of two to three minutes between.

In the interval her mind was clear, and she would beg them to not let her bite them. The convulsions would come on with hallucinations—she seemed to see a little dog,and would exclaim, "There comes that little black dog," and kept repeating it. She had a wild stare in her eyes, and a distressed countenance.

The pulse was small, quick and hard. The mucous membranes quite red, pupils dilated, no fever, but skin cold and clammy. When asked if she had been bitten by a dog recently, she replied yes; she was bitten last fall while at Mr. Green's. When asked where she was bitten at, she placed her hand on the outer and upper part of her right thigh, and said, "here." When I looked she showed a well marked scar on the spot where she placed her hand—the scar being under her clothing. The history of the case is this: Three years ago she was bitten by a dog, and no one knows whether the dog was mad or not. Last fall she was bitten by this little dog of Mr, Green's, but the dog was killed a few days later while after s sheep. The bite got well without any treatment. The girl got along without any trouble until two days before she was taken with these convulsions, when she commenced complaining of feeling badly. Head ached and limbs ached. These feelings grew worse until the morning she was taken, she got up and went out to assist in getting breakfast, but complained so that Mrs. Rogers told her to go back to her room, and go to bed. She started back to her room, and on the way she was taken with the hallucinations which developed so strongly later. She seemed to see the dog, and ran with all her might.

A young man from the neighborhood happened to be coming into the yard at the time, when she went for him, to bite him. He ran for his might and got over the fence. While she could talk,and kept constantly at it, there seemed to be a spasm in the muscles of the thsoat, which caused her often to utter strange sounds, hard to describe, in some instances resembling the bark of a dog. They got her into the house and did everything they could, or knew how, to quiet her, but she grew constantly worse. It required a strong man to her hands, one to her feet and another to her head, and these soon grew tired and had to be relieved. Thus matters were going on when I arrived about half past 12 o'clock.

I began treatment hy administering chloroform. The convulsions at this time were very violent. I brought her completely under the chloroform, and began to fix my dose of Permanganate of Potassium to give her hypodermically; but before I could get it ready she was off in another convulsion. I got it ready, and again gave the chloroform to complete narcosis, when I gave the permanganate. I kept up the chloroform for some minutes, to give the dose time to become absorbed.

In about a half on hour I stopped the chlorofoform and let her come to. She was perfecily conscious and quiet, and talked a great deal; and told us all about the dog biting her. (I had neglected to state that this girl is a poor girl and had only been in this home, which is several miles from her former home, six weeks, and the family knew nothing about her having been bitten.) She soon grew chilly and began shivering. We threw a cover over her, but she kept up her shivering, so I told Mrs. Rogers we had better get her into her bed. We put her in bed, and in a few minutes she had a convulsion. I gave the chloroform and fixed a dose for her to take by the mouth, as soon as the convulsion stopped and without putting her completely under the chloroform. I gave her the dose to drink. She drank the dose (about 5 grains disuolved in water), at about three gulps, and immediately went off into a severe convulsion. I

then put her completely under chloroform, and kept her so for several minutes, and she went off off into a quiet sleep. I stayed until about three o'clock and she was still sleeping.

I fixed and left her medicine to take every two hours, and left chloroform to administer, should she have convulsions again. Kept a constant watch by her and gave the medicine every 2 hours. But after a few doses had been given, she grew sick at stomach, and vomited up the medicine several times during the night. But did not have any more convulsions until next morning a little later than they began the day before; when her attendant gave her the chloroform, after which she retained her medicine again, and did not have any more convulsions until next day, still a little later, when she had one, very slight one, and did not have any more at all. On the second day, at 12 o'clock, I found her with a high fever, temp. 103 or 104 F, (I guess the temp. as I did not have a thermometer to throw away at that time) pulse 120, full and strong, pupils dilated as large as a buck shot, notwithstanding there was plenty of light in the room, tongue very red and swollen so as to completely fill up the mouth, the right leg was swollen and very painful, could not bear any weight on it, and a violent headache. I now put her doses of Permanganate to 4 hours apart, and gave a full dose of calomel and rhubarb, and a capsule of quinine and acetanilid (3 grs. each) between the other doses. Next day at 12 o'clock the fever was decidedly less, tongue less swollen and pain in leg less. She was better in every way. Kept up the same treatment. Next day the fever and swelling were gone, headache gone, and soreness in leg nearly gone. Kept up the same treatment another day, After this the capsules were stopped, but kept her taking the potassium salt for 12 days. She made a complete and uninterrupted recovery, and up to the present time is doing well.

I have been asked since, Doctor do you think it was a genuine case of Hydrophobia? My reply is, I think it was, and surely if it was not Hydrophobia I do not know what it was. I have read everything I can get on the subject since, and it fills the discription, and certainly is not like any other case of convulsions I ever saw before.

DISCUSSION.

DR. HARRIS.—After hearing the paper, without having seen the patient, I would like to know if it could not have been hysteria. There has been a recent hydrophobia scare or epidemic in my own section, and in a family living about a mile from town, there developed some very strange symptoms. The children became affected with dancing knee, they would all bark and snap like dogs, they would jump on the table and on the mantel piece, and turn double summersaults, and fall on the floor and have convulsions. They had some of the same symptoms he mentions.

DR. O'HAGAN.—Hysteria assumes ten thousand different forms, and sometimes it is over the whole country. You know in the Middle Ages these hysterics were looked upon with respect, and people were supposed to be under the influence of some Divine inspiration, but we have learned better, and have learned to recognize the symptoms of hysteria. I would respectfully doubt Dr. Knight's diagnosis of hydrophobia. First of all the evidences are wanting to verify the diagnosis. It is a well known fact that hydrophobia may occur at any time after a person is infected. I know of one case where it occurred in a man 21 years after he was bitten. The fact that the girl was bitten by a dog does not prove anything, does not prove that the dog was rabid, and then the symptoms following could be doubted, and there is no case on record where there has been a recovery. I sat by the side of a poor negro who was bitten and watched him from the incipiency of the disease until he died. All these popular symptoms were wanting. He never exhibited any signs of biting, etc., but drank with avidity and without any attack. While the case is very interesting, still I doubt the diagnosis.

The Keystone of the Medical Arch.†

By T. S McMULLAN M.D., Hertford, N. C.

The rule usually followed by chairmen of sections I shall in some measure break. The purpose being to offer to your mind some suggestions why practitioners of medicine should have a more accurate knowledge of physiology than generally obtains, rather than to present an array of facts which most of us have had an opportunity of knowing whether we have availed ourselves of it or not.

In physiology few facts of importance have been established.

BLOOD AND CIRCULATION.—An investigation of Littlefields has shown that the nuscles of leucocytes and lymphocytes contain a compound neucleohiston formed itself into two substances, which contributes largely to the coagulating of blood.

†Read before the North Carolina Medical Society at Morehead City, June 8, 1897.

When studying the effect of bleeding, Jona has deduced that the alkalinity of the plasma is at its maximum reduction in two hours and returns to its normal in about twenty-four hours; and that about the seventh day after a hemmorage the greatest activity is seen in the spleen and red marrow.

Experiments have shown that gravity is a cardinal factor in dealing with the circulation; and that in man the equilibrium is maintained by the splanchnic vasomotors. Consequently when this comparison has been destroyed or injured, position is important.

Mosso has described a sphy quomate: for determining blood pressure which promises to be practical and convenient for the general practitioner.

That an increased flow of blood through the muscles takes place during and after massage has been clearly proven.

Respiration.—That blood from an asphyxiated animal has more toxic properties than normal blood has been shown.

Nutrition.—It has been demonstrated that glycolysis (or destruction of grape sugar) is not dependent upon the presence of the fibrien factors as originally supposed, but is a function of the formed elements of the blood and is an act of oxidation.

Corvallo has proved that in some of the lower animals perfect digestion takes place, even when the stomach is removed,

Ductless Glands.—It has been made positive that the spleen is connected with the formation of red blood corpuscles, and that its removal in old people is attended by a very marked anæmia.

Oliver and Schafer contend that the suprarenal capsules contain a principle which aids in maintaining tone in the different kinds of muscular tissue; and that their removal causes general muscular weakness and vaso motor disturbances.

Central Nervous System.—It has been shown that the temperature of the brain can be raised 2 to 3 degrees above that of the blood by stimulation and excitement. Mosso states that sleep is entirely a chemical phenomena as the circulation cannot become modified to any great extent we can awake and think: thus contending that anæmia of the brain cannot be the causes but is only an incident.

It has been shown that a median vertical section of the Cerebellum gives no results. So that it is plain that its functional connections are on the same side of the body; removal of either side causing incordination,

The only reference I shall make to chemistry here, Mr. President, is to call your attention to the almost countless numbers of new remedies evolved from the laboratories of the world, and to present a few tests to be used in urinalysis which have seemed to come worthy of remembrance and use.

Ott advises the use of sulphosalicylic acid in testing for albumen: added either in crystals or in 30 (30) per cent. solution it produces a cloudiness, even if the smallest amount be present.

Carres recommends the use of resoercin as a reagent to determine the presence of albumineuria; both of these tests have been found to be more aocurate than the ones heretofore in general use.

In regard to the qualitative tests for sugar after using all that I have seen proposed, none have seemed so satisfactory in ordinary practice as Trommers or Fehlings and for quantitative analysis Whitneys is the most useful and practical.

The volumetric on Whitneys test is; a solution of alum, cupric sulphate of which one drachm is discolorized by 1.30 of plucass. The urine added drop by drop will upon boiling if sugar be present discolorize the solution and by a carefully arranged table the quantity can be estimated.

I have been content Mr. President, merely to enumerate some of the more practical advances during the past current year, and I shall leave to your leasure and your inclination the task of elaborating and to your research and knowledge, the preference of believing or rejecting them.

The history of medicine began, gentlemen of the society, when Egypt was the queen of civilization; for we find it recorded in the book of Moses that the priests exercised the art of healing, and so attempt to solve the two greatest problems given to man since the world began; the salvation of the soul and the cure of the body.

The art was introduced into Greece by Chiron and Hippocrates formulated the first system of treatment; that based only upon false deductions and dogmatic teachings. And so on down the ages certain medicine were given for certain diseases; and not that their actions were understood, but because they had been supposed to have cured others; they had in those days books and scientists and teachers, but yet they were like

"The bookful blockhead, ignorantly read,
With loads of learned lumber in his head,"

and medicine only began to be put upon a rational basis when in sixteen hundred and twenty-eight the discovery of the circulation of blood was given to the world.

It is is said that great events occur in clusters; that the greatest minds shine together. It was during the great upheavels

in England in the sixteenth century, amid the clamors ot the people when brother was arrayed against brother, when church hurled its anathemas at the puritans, and the puritans their denunciations against the church, when events arose which terminated in the din of the arms; that at Marston Moor shook the house of Stuart from the throne, that the great fact was given out that there were four humors, as Galen had taught, but that one which was the elixir of life. This discovery of a physiological fact has revolutioned the practice of medicine and has made the name of Harvey immortal.

From then until now, upon the researches made by the psysiologists hangs our ability to mediate. It is the keystone of the Medical Arch; the bed-rock of our therepeusis, the knowledge of which has been the power which more than any other has driven out from civilization the heinous practices and beliefs in witchcraft; and will be the power which more than any other in the days to come, as the laity becomes familiar with the intricate and beautiful economy of man's make up and learns to know that it is safe only under the guidance of one versed in these things will sweep away all quackery and charlatanism. I should like to plead right here for a more urgent insistence by our physicians upon the importance of having our children instructed in this branch; it is essentially the science which belongs to both laymen and professional, the knowledge of it its more exact details is for those whose duty is to direct in their proper channel all those bodily functions which have gone astray but its acquaintance with all men leads him to a heightened opinion of themselves and a more profound reverence for that mighty power to whom they owe their being.

Chemistry is the closely allieds ister of physiology. The human body is one great physiology. The human body is one great and intricate laboratory and life one series of chemical changes. New tissues are being formed and old ones which have served their purpose, and which for a time have made the cycle of life revolve are cast away. Upon these and upon the direction of these in the groves marked out for them by the hand of omnipitence hangs our hope of living in this world,

Mr. President, I trust I am free from cant when I say that I do not believe, with no knowledge of handiwork and with only the purpose to impose himself upon unsuspecting sufferers for the sake of grain, dares meddle with the health of his creatures, made in his image and into whom He breathed the breath of life. No man at the present day can render as his excuse a lack of opportunity to know; if no other means presented the easy access which we have to the current medical Journals would enable all of us to learn. Those of the profession in this State, who have their heart in the work of healing, should see to it that the people so far as they can help it shall not be made the victim of wilful neglect and preventable unfitness.

We have not yet reached the culmination of physiological research. The day is coming when all of us will be able to have a nearer and better view of his and his fellowmans makeup; but because we do not see the need let us not have less faith in our art, but inquire ourselves to see if, even in our limited fields we may discern something which will add to man's hope of living.

The great in war have their monuments; the great in peace their honors, and the great in verse have had woven about their memories chaplets of praises wrought from their own sweet songs. But meagre has been the homage paid to keep fragrant the memory and to keep green the graves of that army of men who have toiled and delved, that they might make, not themselves great, but us more able to cope with that enemy which was thrust upon us when Adam fell. Mr. President I have great faith in the future of our act, and I believe that the day has dawned which will give to the laborers in physiological science their need of praise. And as the day grows older and the "Science of Life" more exact, we will hear the voice of the people say (except the great arch enemy) "Medicine is King, long live the king."

From the Case Book of a General Practitioner.

Dr. H. C. Shuttee, of West Plains, Mo., in a paper entitled "From the Case-Book of a General Practitioner," reported several interesting cases.

Case 1.—Was one of membranous croup in a child, age 3 years, with whooping cough. On the third day tracheotomy was performed. The cough was violent and secretions abundant and viscid, they were forced up by the side of the tube and caused great swelling of the tissues of the neck, so that the tube soon became too short to reach the trachea. Hooks made of gold-plated wire loops were used to keep trachea open. These were 1⅛ inch long, and were worn 3 weeks. It was over a month before wound was closed. A spray of sod. bicarb. sol. and ess. pancreas was used to liquify secre-

tions, and was very effective. The internal treatment consisted of bichloride mercury, iron, etc., and small doses of antipyrin for pertussis. This was in pre-antitoxin days.

Case 2.—A youth, age 18, was attacked with slight diarrhœa after overwork, and in his absence another physician was called, who prescribed astringents and opium to check diarrhœa. He lingered along for a week, being up and down, till severe symptoms of poisoning from absorption of toxic products from the intestine set in and when he saw him on the 8 days was in a state of collapse. He attributed his death to auto-intoxication from the intestines. The doctor alluded to the importance of a recognition of intestinal auto-intoxication, the important function of the liver in destroying them, and the great necessity of assisting nature in getting rid of the offending material instead of preventing the success his efforts by opium, etc. He also adverted to the important researches of Kühne in the physiological chemistry of the peptones, and the possible source of poisoning by improper transformation of them in the small intestines.

Case 3.—This was a case of poisoning by bromoform in a girl 8 years old, with pertussis. He had ordered a 3 oz. mixture of alcohol, syrup and water comtaining 50m. bromoform, to be shaken and a teaspoonful given every 3 hours during the day and at at night if cough was severe. In half an hour after taking last dose she became comatose, respiration and pulse very irregular, pupils dilated. Breathing became so bad that artificialon respiratihad to be practiced for five minutes. Strychnia and digitalis hypodermically restored her.

He alluded to cases reported by Guntermann (Am. Tr. Bk. M. & S., 1896), of bromoform poisoning in which pupils were normal, and respiration and pulse were not affected.

Case 4.—A young man with syphilis and pulmonary tuberculosis had fistula-in-ano which had been twice unsuccessfully operated on by another surgeon. It was causing great pain and patient was very much debilitated. The rectal mucous membrane was undermined for 3 inches. The first operation was not successful because two indurated lines leading into buttock were not removed; at a subsequent operation, two months afterwards, these were laid open and removed and he made a good recovery. Has gained 30 pounds and is now at work. The doctor asked if there was any antagonism between siphyllis and tuberculosis.

Case 5.—This was a case of erythema multiform in a girl aged 17, in which there was very great swelling of hands, feet and face, urine was scanty and contained brick-dust deposit. She resisted all treatment, which was mainly ellimitative,until she was put on a milk diet, bicarb. potash and liq. fero-salicyl, when she began slowly to improve and finally, in 3½ months, recovered, an unusually long time, as most cases recover in from 2 to 4 weeks.

Case 6.—In this case, that of a widow aged 24, a chronic pneumonic consolidation of the lower lobes of both lungs with thickened plura, was mistaken by himself and another physician for double pyothorax. All the physical signs of pyothorax, including suppression of the whispered voice, were present, and she had chills, high fever, profuse perspiration, etc. She had severe pain and an exceedingly distressing cough. She was chloroformed and it was intended to resect one or more ribs on both sides, but as a large aspirating needle thrust repeatedly into each side did not locate pus, no operation was done. To his surprise she began to improve, the cough stopped completely, and she soon got well.

The doctor asked:

1. What was the exact pathological condition?

2. Are such mistakes in diagnosis common, or was it merely the result of our stupidity?

4- What relieved her, the chloroform,the puncture, or both?

4. In a similar case, where the diagnosis of consolidated lung and thickened plura was positively made out, resisting all other treatment, would we be justified in chloroforming and puncturing the lung?

The Warm Bath for Abdominal Palpation.

The hot bath has long been used for the reduction of strangulated and incarcerated hernias, for the relaxation of spasm associated with urethral stricture, or with the passage of renal or biliary calculi. It seems probable that in various questions of diagnosis in abdominal affections the bath might likewise be of service. Everyone has experienced how difficult it may occasionally be even with moderate chloroform and ether narcosis to obtain the complete relaxation of the abdominal walls necessary for the proper palpation of the viscera. At all vents, an attempt by palpation in the hot bath might be first attempted in many cases. Schuster recommends this method for palpation of the liver, kidney, gall-bladder, abdominal tumours, etc., in difficult cases. In a recent case we were easily able to palpate the spleen by this method, though previously we failed to feel it.

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THE

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SUBSCRIPTION. $2-50 PER YEAR,

MEETING OF THE NORTH CAROLINA MEDICAL SOCIETY.

The State Medical Society convened at Morehead City June 8th and closed June 10th.

The meeting in every way was a great success. The weather was delightful, the attendance was good, and the papers presented were of a high order and freely and interestingly discussed. The local committee of arrangements, under the leadership of Dr. Francis Duffy, were indefatigable in their efforts to make the meeting sociably enjoyable to the visitors, and the success of their endeavors was manifest in the expressions on the part of the visiting members.

The President for the ensuing year is Dr. Francis Duffy, of Newbern. Dr. Duffy is entirely deserving of the honor conferred upon him. His clear and deliberate, dignified manner and ready grasp of the strong points of a subject, render him admirably fitted for the post of presiding officer.

ADDRESS OF WELCOME.

W. F. ARENDELL, Morehead City, N. C.

Chairman, members of the Medical Society of the State of North Carolina, Ladies and Gentlemen:—It is with great pleasure in behalf of the Mayor and the citizens of our town that I appear before you this morning to bid you welcome to our embryo City by the Sea. It is useless to say that I hope not only to be profited by this Session, but that you shall have this in after years to look back to as a gala day and say to yourselves that you enjoyed it well.

You represent one of the oldest professions in the world, and I believe one of the greatest and noblest. Notwithstanding the fact that you do represent this, you are among the last to organize to protect yourselves against internal and external foes. You have organized and have already accomplished great good in North Carolina. There are men in North Carolina who have had for their diplomas sheepskin for which they paid as low as $10.00 for and there are some cities in North Carolina where men are practicing by paying the Clerk of the Supreme Court $10.00 and swearing to have practiced so many years. You cannot do any better than to protect yourself in this manner and I hope and pray that you will have success in your deliberations and accomplish much good in the State of North Carolina.

We have been called the Rip Van Winkle of the United States, and especially of this part of the state. It is said that we are 50 years behind the other part of the State. When I see improvements made in Northern States, I thank God that we are fifty years behind and I sometimes wish that we were 100. (Applause),

You will find us primitive in a great many ways, but we will give you a cordial welcome. If there is any profession that has a warm place in my heart it is that of a physician of medicine, the general practitioner, the Country doctor. My father was one of these. He graduated at the University of New York and practiced medicie here until he died. My uncle would have been one of your profession; so would I had my father permitted. I honor your profession. It has made for itself a history that will never die, that has always been characterized by one of the greatest virtues of the human race, and that is humility. You have gone foremost wherever danger and disease lurked, you have let the world acknowledge your ability and never claimed it for yourself. You have not only sought out ways to promote health, but you have sought out ways so that death might be easier when it did come. There is a legend that death was at one time so that it could not come into the world and that your profession was the first to find it. It is said that there was a German woman living in a German province who had a couple of apple trees, and the boys used to come and rob it on Saturday nights. One night there was a visitor came and knocked at the door and asked for admittance. She gave it kindly and entertained an angel unawares. In the morning the angel said to her, to make any request she desired and it would be granted. She asked the angel that any body who would go into her apple tree should not have the power to get down. The next Saturday the boys came down and robbed the trees. When they got up she had them there, they could not get down and she would not let them down until they promised that they would not rob the trees any more. Time came on, her hair was sprin-

kled with gray, and death came and knocked at her door. The old lady wanted to know "Who's there?" "Death!" "I am not ready for you," "I can't help it." "Death, wont you please go out and get in the apple tree and wait till I get ready and get my hair fixed." "Oh yes madame." So he went up the apple tree and could not get down and there was no death. Men sought to be killed in war and by poison, but there was no death. They searched for death everywhere and finally a medical practitioner found death and tried to put him down. Notice was sent to the King and the old lady said she would never permit death to come down from that apple tree, that she was perfectly willing for him to go to anyone else, but she wanted him to keep his hands off of her. So death came down from the tree and that is why he is in the world today.

History tells us that Napolean in Egypt, after capturing the people to keep them from fighting he sent for his surgeon and says "I want you to poison these men." I can see the grand look in his face as he says "Sire my mission is to cure and not to kill" and he would not kill them. Napoleon took the men and shot every one of them and that was the beginning of his downfall.

You have always been foremost when disease came, and you doctors go to it while all other men run away as fast as they can. There are some younger members who are just starting out, but most of you are older men. I want to say to the young men that if you look at the stars you will fall in the ditch. You will never get any higher than your aim, and no man can start without an ideal. I do not care what it may be, it will crumble and decay in your hands, you will find unless you take one ideal and that is the Great Physician, Christ Himself. Take Him for your pattern and you may go on and add perfection to perfection to your qualifications, never reaching but becoming more like him. Now again Mr. Chairman in behalf of our town I bid you a cordial welcome to our town.

RESPONSE TO THE ADDRESS OF WELCOME.

By H. A. Royster, M. D., Raleigh, N. C.

I have always cherished a pardonable pride in wishing to be thought well of by my friends. I am going to do something this morning, which will, I think, make me extremely popular, for the time, that is, I am going to make a short speech. Worthier lips than mine might have been chosen to frame a reply to the very warm welcome we have received. While I acknowledge that there are several things I can do, I must just as cheerfully confess that there are several I cannot do—one of which is speech-making. I will not mention those things I can do for fear of wearying you.

General Grant used to say that there were only two tunes he knew; one was Yankee Doodle, the other was not. I hope at any rate, that on this occasion I may be spared the fate of a certain Philadelphia politician who went to Chicago to deliver an after dinner speech. He talked about an hour, and on returning home and being asked by his wife as to his night's success, said "I did very well, so well that when I sat down they told me it was the best thing I ever did."

But I assure you, friends of Morehead, that however feeble these mere words of mine may be, we all feel welcome. If there is any lack of enthusiasm in this response, you may lay it to the diffidence of the one who addresses you—one of the youngest members of the society both in years and experience. This might have been averted had some older fellow been selected in my stead. We are indeed glad to be here. It is a pleasure to us to come together for the first time at Morehead City, the delightful seaside resort of our State, and the place where so many notable gatherings of our people are held. Everything is favorable for a pleasant, as well as a profitable meeting. If we indulge more in fishing, sailing, and eating than in dry, musty discussions of medical theories, it will be because the allurements here prove too much for our human souls. My friend, Dr. Blacknall, will be responsible,

Allow me to say that we gratefully appreciate the warm welcome extended through your worthy representative, and shall try to show it by enjoying to the fullest your bountiful hospitality.

PROCEEDINGS OF THE SOCIETY.

First Day—Morning Session.

The President called the Society to order June 8th, 1897.

Dr. G. T. Sikes presented a paper entitled "Law vs. Justice."

Dr. J. W. White, Chairman on Microscopy and Pathology, read his report. Moved and carried that it be referred to the Committee on Publication.

Dr. Register read a paper on "The Specific Action of Quinine in Malaria." Discussed by Drs. Sikes, Royster, Crowell, O'Hagan, Duffy and Robeson.

On motion, the Society adjourned to meet at half past three o'clock.

AFTERNOON SESSION.

The Society was called to order by the President.

Moved that the Society adjourn, as the Mayor had asked the members to go sailing. The motion prevailed, and the Society adjourned to meet at half past eight o'clock.

EVENING SESSION.

The Society was called to order by the President.

Dr. T. S. McMullan read a paper entitled "The Keystone of the Medical Arts." On motion, it was referred to the Committee on Publication with thanks.

Dr. Goodman presented a paper on "The Ideal Antipyretic." Moved and carried that the paper be referred with thanks to the Committee on Publication,

Next on the programme was a paper by Dr. Albert Anderson entitled "Antitoxin in the Treatment of Diphtheria."

Dr. Flippin read a paper entitled "Diphtheria Antitoxin." Discussed by Drs. Anderson, Robeson and Poole.

The Society adjourned to meet the next day at half past nine o'clock

SECOND DAY—MORNING SESSION.

The Society was called to order by the President.

A paper on "The Microscope in the Diagnosis of Malaria," was read by Dr. R. W. Whitehead. Discussed by Drs. Hines and Anderson.

Dr. John C. Rodman read a paper entitled "When to Operate." Discussed by Drs. O'Hagan, Hines and Weaver.

Dr. A. J. Crowell presented a paper on "An Interesting Case of Appendicitis."

Moved and carried that the papers on Surgery be read and discussed at once, as it would save time.

Dr. James M. Parrott read a paper on "The Surgical Treatment of Hemorrhoids."

The conjoint session of the Board of Health was called, the reports were made, and on motion were adopted.

AFTERNOON SESSION.

The Committee on Nominations recommended the following:

Orator—Dr. Albert Anderson.

Essayist—Dr. H. A. Royster.

Leader of Debate—Dr. J. A. Burroughs.

Committee on Publication—Drs. E. C. Register, R. D. Jewett, Geo. G. Thomas and R. J. Brevard.

Moved and seconded that the report of the committee be adopted. The motion was carried.

The Committee on President's Address made the following report: We find that at the meeting of the Society in Charlotte in 1887 that it adopted the following resolutions, to-wit: That the North Carolina Medical Journal be declared the official organ of the Society, and that its editors be entitled to the papers for publication. Our opinion of these resolutions is that it does not give the organ the exclusive right to print the transactions unless terms satisfactory can be agreed on with the Committee on Publication. We recommend further that the President appoint a committee to be called a Historical Committee of the North Carolina Medical Society, whose duty it shall be to collect the data of the State's worthy physicians, in order that their distinguished services may not be lost to posterity. We further recommend that the committee call the attention of the profession to the form of insanity in the intermarriage of idiots, and we offer as a suitable and safe remedy that the State erect a comfortable home for this class of unfortunate humanity, thus preventing the transmission of their misfortune to posterity. The motion was carried.

The hour for the election of officers having arrived, the name of Dr. Francis Duffy was put in nomination for President. On motion, Dr. Duffy was elected by acclamation.

The following Vice-Presidents were nominated and elected: Dr. E. C. Register, 1st; Dr. J. B. H. Knight, 2nd; Dr. J. T, Cotton, 3rd; Dr. F. H. Russell, 4th.

Nominations for Secretary being in order, Dr. R. D. Jewett was nominated, and the Treasurer was instructed to cast the vote of the Society for him. Dr. Jewett was elected.

Dr. M. P. Perry was nominated for Treasurer, and there being no further nominations, the Secretary cast the vote of the Society, and he was declared elected.

A vote of thanks was tendered the people of Morehead City for their kindness and hospitality.

SECOND DAY.—EVENING SESSION.

Annual Oration by Chas. J. O'H. Laughinghouse on "A Few Hints on Medico-Social Ethics."

Moved that the Oration of Dr. Laughinghouse be referred to Committee on publication with the earnest thanks of the Society.

Moved that because of the absence of J. B. Powers that the annual essay be read by title and referred to Committee on Publication. Motion carried.

On Motion the Society adjourned to meet next morning at 9:30 o'clock.

THIRD DAY.—MORNING SESSION.

The Society was called to order by the President.

Dr. H. A. Royster read a paper on "Practical Results in the Diagnosis of Continued Fevers from Examination of the Blood." Discussed by Dr. Duffy, Dr. Parrott, Murphy, Crowell and Dr. Hayes.

Dr. J. B. H. Knight presented a paper on "A New Treatment of Hydrophobia—Report of a Case,—Recovery." Discussed by Dr. Hayes, and Dr. O.Hagan.

Dr. Montgomery not being present, on motion, his paper on "Modern Obstetrics" was read by title and referred to Committee on Publication.

Dr. J. Steven Brown and Dr. Annie L. Alexander not being present it was moved and carried that their papers be read by title and refered to Committee on Publication.

Communications were read by the Secretary from Dr, R. H. Winborne and Dr. J. B. Powers.

Moved by Dr. Hodges that the Secretary be instructed to send the greetings of the Society to Dr. Winbourne.

As it was not time for adjournment the Society proceeded to the work of the afternoon.

There being no unfinished business the Installation of officers was now in order.

Dr. O'Hagan and Dr. Hodges were appointed to escort the new President to the Chair.

Dr. Murphy said: Gentlemen I present to you my worthy successor. I hope you will be as lenient and kind to him as you have been to me. I thank you sincerely for the help you have given me for this is the first meeting I have ever presided over.

In reply Dr. Duffy said:

Gentlemen of the Society I must say that it is with considerable diffidence that I accepted this trust which you have done me the honor to place in my hands. I feel that I am very little acquainted with parliamentary usage and so likely to be embarrassed in these respects in presiding over this body that I must ask your indulgence, yet I know I am in the house of my friends and I do not expect any harsh criticisms. I shall promise to do my best and that is all that I can do. Again I thank you for the honor.

Next was the appointment of Chairman on Sections. As the President wished some little time on this he announced that the report would be handed in later.

Moved and seconded that a vote of thanks be tendered the people of Morehead City and to the Proprietor of the Atlantic Hotel, Dr. Blacknall for the kindness and hospitality to the Members of the Society. Motion was carried.

On motion the Society adjourned to meet in Charlotte next May.

BOOK REVIEWS.

MANUAL OF STATIC ELECTRICITY IN X RAY AND THERAPEUTIC USES, by S. H. MONELL. M. D., Founder and Chief Instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics and Roentgen Photography; Fellow of the New York Academy of Medicine. 614 pages, octavo, cloth, gilt. Price, $5 net; postage, 35 cents. Now ready for delivery. New York: William Beverley Harrison, Publisher, 3 and 5 W. 18th Street.

Physicians have hitherto had no text-book of instruction upon the therapeutic uses of static electricity. The need for an authoritative work upon this subject is recognized throughout the medical profession. Such a work is rendered especially necessary by the employment of the static machine in exciting X rays.

As a practical clinician, writer, and teacher, the author of this book tells *what to do* and *how to do it* in both X ray work and the treatment of patients.

This manual practically covers the medical uses of the Holtz apparatus, and is accordingly a necessity to every physician or surgeon who seeks information on the subject.

The book is devoid of pathological and theoretical discussion, and is strictly what has long been needed, a therapeutic treatise on static electricity.

Five chapters are devoted to Crookes tubes, X-ray operative methods and X-ray photography. These chapters are original and contain complete practical instruction, much of which is not in print elsewhere. The directions are so plainly written out that a beginner can follow them successfully.

In the therapeutic chapters the clinical indications for different methods of treatment are set forth with the author's characteristic precision and clearness. Contra-indications are also carefully considered. Methods of treatment are explained so practically that the reader can understand and employ them. The manifest aim of the author throughout this treatise is to be everywhere explicit, candid, and free from bias. The physiological limitations of the static current are counterbalanced against its established usefulness, and nowhere are any claims advanced as to theroretical merits.

Certain of the chapters possess unique value in connection with static electro-ther-

apeutics. The chapter on Pain discloses the exactness of known indications for special methods of treatment. The chapter on Morbid Mental States is one of the most instructive and valuable in the book, Rheumatoid Arthritis receives especially full consideration, and directions for treatment of every stage are definitely described. The chapter on Writer's Cramp illustrates the author's originality of method and painstaking care in the study and treatment of this disease, in which he has had exceptional experience.

Two entire chapters establish the value of static electricity in the treatment of important skin diseases. These chapters will be found especially valuable to the general practitioner as well to the dermatologist.

The section devoted to the Employmedt of Static Electricity in Gnyecology and the various phases of women's diseases states when and how to use this agent with this class of cases.

The physiological properties of static electricity constitute the rational basis of its therapeutic uses and are fully stated. Every statement made by the author is conservative and moderate in tone and is supported by actual experience.

In the second part of the book the author performs a valuable service in grouping together with experienced discrimination the links of the therapeutic chain that connects static electricity today with its remarkable past. This section of the book, however, presents material for clinical study which is of the very greatest importance to every owner of a static machine. No student of the subject can rightly comprehend the therapeutic stability, efficiency, and clinical value of this agent without a knowledge of previous investigations and demonstrated results. To gather together and present an essential and orderly sequence of reliable facts was a difficult task, for records upon this subject are either out of print or not readily accessible.

The book is one which the medical library will scarcely be complete without, while it also appeals especially to every electro-therapeutist, and to the surgeon who employs X-rays in either hospital or private practice.

Hysteria and Certain Allied Conditions; Their Nature and Treatment, with special reference to the application of the Rest Cure, Massage, Electro-Therapy, Hypnotism, etc. By Geo. J. Preston, M. D. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1897.

The author states that there are two reasons that warrant the appearance of this volume, namely: the importance of the subject, and while there exists an immense amount of literature on hysteria, there is no recent book in English on the subject. Of course it is treated of in works on general medicine, but rarely with the minuteness that the importance of the subject warrants. This work is divided into eleven chapters, including Historical, the Nature of Hysteria, Etiology and Pathology, Symptomatology, Disturbances of Motion, Convulsive Attacks, the Mental Condition in Hysteria, Viseral and Vasomotor Disturbances, Differential Diagnosis, Treatment, Electro-Therapy, Hydro-Therapy, Massage, the Rest Cure, Hypnotism, Surgical Interference in the Treatment of Hysteria, Index.

This work presents these subjects in as concise a manner as possible, and nicely indicates the various therapeutic measures that have been found useful in the treatment of this disorder. The general practitioner, for whom this book is especially intended, not only wants to know to what class of cases the rest cure, massage, electricity, &c., are applicable, but also how these important therapeutic measures are to be carried out. Hence the sections on these and other modes of treatment are prepared with some attention to detail. The drawings in this work are excellent. The work is printed in first-class style, and is to be greatly admired both from a scientific and mechanical standpoint.

A Treatise on Surgery. By American authors. Edited by Roswell Park, M. D., Professor of Surgery and Clinical Surgery, Medical Department University of Buffalo, Buffalo, N. Y. In two very handsome octavo volumes, comprising about 1600 pages, with about 800 engravings, largely original, and about 49 full page plates in colors and monochrome. Volume I, General Surgery and Surgical Pathology. Vol. II, Special Surgery. Price, per volume, cloth, $4.50: leather, $5.50 net. Lea Brothers & Co. 1896.

Some time ago we had the pleasure of reviewing the first volume of this excellent treatise on Surgery. We have now before us the second volume which is just as highly commended and approved, both from a didactic and practical standpoint. This work is a presentation of a thoroughly modern text-book reflecting the methods of teaching developed by large experience.

It is with much pleasure that we commend to you this elaborate Treatise on Surgery, edited and largely written by our distinguished friend, the well known surgeon, Roswell Park. This volume contains 800 pages, and is devoted to special or regional surgery, in the preparation of which the

editor has associated with his own the labors of other American surgeons, whose names are found on the title page. The names are familiar to us and are prominent both in the practice and teachings of surgery in this country.

The practitioner who desires to keep up with the progress of surgery will not find his library complete until he obtains Park's Treatise on Surgery. This work will be peculiarly adapted to the student's work, because among the lists of contributors are to be found the names of prominent surgeons of almost every section of the United States, representing the methods of teaching developed in the leading medical colleges of the country. The work is already to well known to need a detailed review. The illustrations are ample. The full colored engraving possess all accuracy, which greatly adds to the value of the book. It is clearly seen that in the subdivisions of the work the many writers have embodied the teachings accepted at the present time, and the methods now in vogue, both as regards the causes and the treatment of the disease and pathological conditions which are appropriately considered in special surgery. The publishers have issued the volume in excellent style.

Surgical Hints for the General Practitioner. By Howard Lilienthal, M. D., Assistant Attending Surgeon to Mt. Sinai Hospital, New York City. New York: International Journal of Surgery Company, 1897. Price 25 cents.

In writing this little book the author's aim has been to present a number of observations and suggestions whose value has been thoroughly tested at the bedside and in the operating room. A review of its pages will show how much practical information he has conveyed within a small compass, and this he has been able to do by eschewing all superfluous verbiage, and by writing clearly and to the point. The material is well arranged, the typograph excellent, and the little volume is of a convenient size to be carried in the pocket and perused at leisure moments.

LITERARY NOTES.

Lippincott's Magazine for June, '97. —The complete novel in the June issue of Lippincott's, "As Any Gentleman Might," is a rattling tale of adventure by William T. Nichols. The hero is an American, but the action is mainly in England, and the time is the early part of the present century.

The other stories, "To Him that Hath," by Annie Nathan Meyer, and "From the Grand Stand," by Jean Wright, are very brief. The former shows how subscriptions may be won for charitable work.

"A Feathery Debut," by Lalage D. Morgan, is a charming account of a family of thrushes, whose domicile was in the writer's garden. Natural history is further represented by "A Year of Butterflies," by Frank H. Sweet.

Fanny Bullock Workman describes "Spanish Plains and Sierras;" R. G. Robinson writes of "A Yankee Farmer in Florida;" and John Murdoch has some words on "Fireplaces of Snow."

"College Athletics" are vindicated by Albert Tyler, one of the American victors in the Olympian games at Athens in 1896. Francis M. Butler writes of "Teacup Times," and Edward S. Van Zile resurrects "New York's First Poet," namely, Jacob Steindam, whose works appeared in 1659 and 1661.

The poetry of the number is by Julien Gordon, Carrie Blake Morgan, and Grace F. Pennypacker.

In entering its fifty-fourth year The Living Age seems to have entered a new career of prosperity and popularity. Among the evidences of this is the opening of new departments which enable it to cover a much wider field than ever before. Its translations bring its readers into close touch with the leaders in thought and action of Continental Europe, while, in the Monthly Supplement selected readings are given from leading American periodicals and from new books, as well as a list of the "Books of the Month." The gain in *quantity* is shown by the addition of 88 pages in the first quarterly volume of this year. This alone, continued through the year, would make a good-sized volume of 352 pages. Of the *quality* of the contents it is enough to say that it well maintains its former high standard. It could not do more.

Of the more notable articles which have appeared in recent issues may be mentioned "The Mission of Tennyson," by W. S. Lilly; "Henry Drummond," by W. Robertson Nicoll; "Fathers of Literary Impressionists;" "Gibbon's Autobiography," by Leslie Stephen; "France and Russia in China," by Holt S. Hallett; "Herbert Spencer and Lord Salisbury on Evolution," by the Duke of Argyle; "A Day of Celebration," by Walter Besant.

"In Kedar's Tents," a serial, by Henry Seton Merriman, author of "The Sowers," reaches its twelfth chapter in the issue of May 8, No. 2757, which is also the Supplement number, giving, in addition to the

regular sixty-four pages, twenty-four others containing eight selections from American magazines, four readings from New Books, and a list of the Books of the Month.

In the course of a year twelve such numbers are given, besides forty of the usual size, 64 pages, aggregating over three and a half thousand double column, octavo pages of the choicest reading that can be obtained; and the price is only $6.00 a year.

Address,

THE LIVING AGE CO., Boston.

The Macmillan Company is to publish *Constipation of Adults and Children*, with special reference to habitual constipation and its most successful treatment by the mechanical methods, by H. Illoway, M. D., formerly Professor of the Diseases of Children, Cincinnati College of Medicine and Surgery; formerly visiting Physician to the Jewish Hospital, Cincinnati, etc.; Member of the Medical Society of the County of New York, of the New York County Medical Association, etc. The book, beginning with chapters on the Anatomy of the bowels, on peristalsis, on flatus, takes up the whole subject of the retention and retardation of stools, whether of an acute or chronic character. In a cursory review all the pathological conditions that may lead to an acute or chronic constipation (including history of foreign bodies, congenital malformation, etc.,) are given, whilst the etiological factors that lead to habitual constipation, the real theme of the book, are treated of *in extenso*. In the chapters on treatment of this condition all the various mechanical measures recommended by most eminent authority as Massage, Electricity, Hydropathy, etc., are given with all the necessary detail and with full illustrations so that every one may become fully competent to treat such cases. In addition there are chapters on the non-operative treatment of hæmorrhoids, fissure of the rectum and on the treatment of various nervous conditions that lead to habitual constipation. The book has a special chapter on the treatment of constipation in very old people. Part II is devoted altogether to children. It contains an extensive formulary for adults and children.

One finds the expected variety in the contents of the American Monthly Review of Reviews for June. The subjects of the sugar tariff, a sixty years' retrospect of the British Empire, the recent visit to the United States of M. Brunetiere, the French critic; the defective eyesight lately developed among American children, and the movement for the pensioning of school teachers, are treated in special articles. The editorial department entitled "The Progress of the World," covers such topics as American intervention in Cuba, the relation of Hawaii to the sugar question, the use of money in politics by corporations, the enlarged metropolis of New York, the fate of the arbitration treaty, European alliances and the Greco-Turkish war, the future of Greece, etc.

THE ABUSE OF THE DISPENSARY.—Dr. George F. Shrady, in the June Forum: It may be broadly stated, as the result of exhaustive statistical study, that fully 50 per cent. of the patients who apply for free medical aid are totally undeserving of such charity. The main reason for this is that no effectual means are taken by the managers of these institutions to correct the abuse. For the sake of donations and the ostensible good accomplished by the treatment of a large number of patients, these charities are managed on the usual business principles of proving their right to be and to prosper on the assumed basis of demand and supply. In New York alone there are one hundred and sixteen dispensaries, each one of which is vying with the other in propagating the worst form of pauperism. The public is being taught that nothing is more freely given than medical advice to any who may ask for it. The institutions in question are crowded daily by hundreds of well-to-do patients, who are encouraged to defraud the really poor and to cheat the charitably disposed doctor of his legitimate fee. All this goes on in spite of protests, and in open defiance of all the laws of ordinary decency and fair play. The managers of these so-called charities, who virtually have the matter in their own hands, while openly pretending to deplore present conditions, are covertly combating every effort at reform on the ground of its impracticability.

Buffalo Lithia Water Solvent of Urinary Calculi.

That the free use of Buffalo Lithia Water is a most valuable agent in the therapeutics of the lithæmic or uric acid and the gouty diatheses scarcely needs additional confirmation. The recorded experience of Drs. Hunter McGuire, Allard Memminger, H. C. Wood, J. Herbert Claiborne, John T. Metcalf, John H. Tucker, Alex. B. Mott, John V. Shoemaker, Chas. B. Nancrede, Cyrus Edson, Lewis D. Mason and hosts of other eminent clinicians attest this. But the claim that this Water is a *solvent of*

urinary concretions or calculi in the kidney and bladder—that it disintegrates and washes them out of the bladder—seemed too enthusiastic for some to accept. This claim was put to the surest of practical tests last winter, when fragments of calculi passed by patients who had for some time been taking Buffalo Lithia Water, were subjected to analysis by three of the most able and distinguished chemists of the world. Dr. A. Gabriel Pouchet, Professor of Pharmacology and Materia Medica, Faculty of Medicine of Paris, etc., advises the use of the water of Spring No. 2, to disintegrate and eliminate vesical or renal calculi; and, in a recent pamphlet on Buffalo Lithia Springs, he presents eight illustrations from photographs of disintegrated calculi passed by as many patients while under the influence of the Water. Dr. R. Ogden Doremus, Professor of Chemistry in Bellevue Hospital Medical College, New York, photographs some fragments of calculi disintegrated and eliminated by the use of Buffalo Lithia Water, Spring No. 2. Dr. John Atifield, F. I. C., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, and the distinguished author of the *Manual on Chemistry*, used generally as the text book in academic, medical and pharmaceutical colleges of this and foreign countries, likewise by his analysis of five specimens shows that the calculi were disintegrated and eliminated "by patients while drinking the waters." In addition, every day professional and clinical observation confirms the facts named. These Waters have now been prominently before the profession for forty years or more. Were they unable to meet the claims made for them, their use by prescription would long since have been discontinued. This is too practical an age to perpetuate the use of agents that have been tried and found wanting. But the demand for Buffalo Lithia Water, for the purposes named —especially that of Spring No. 2—has steadily increased, until now, nearly the full supply from the Springs is daily consumed. It is the great value of Buffalo Lithia Water in the conditions referred to that has caused the opening up of springs and wells in all parts of the country, trying in vain to attain a comparable record.—*Virginia Medical Semi-Monthly, May 14, 1897.*

At the last meeting of the Board of Visitors of the Medical College of Virginia, Dr. John W. Long, of High Point, N. C., was unanimously elected Emeritus Professor of Gynecology and Pediatrics in that institution.

Widal's Reaction as an Aid to Diagnosis in Typhoid Fever.

At the fifty-first annual meeting of the Wisconsin State Medical Society, which was held at Racine, Wisconsin, on May 5th, 6th and 7th, 1897, it proved to be the most successful meeting ever held, The attendance was large and the papers were of the highest character. One of them which aroused a great deal of interest was read by Dr. Walter B. Metcalf, of Lake Geneva, entitled "Widal's Reaction as an Aid to Diagnosis in Typhoid Fever." The Doctor reviewed briefly and to the point the ordinary methods of diagnosing typhoid fever, and stated that it was not of any great value in the past to make an early diagnosis, but that today, in the light of the great advances made in orrhotherapy, the fact that we are just on the threshold of its domain and as we look out upon the field we are confronted by almost unlimited possibilities, the value of an early diagnosis is apparent.

Great progress has been made in the application of the principles of orrhotherapy to the treatment of typhoid fever. Investigation in the latter direction has been stimulated, and at the same time facilitated, by the discovery of the influence exerted by the blood of persons who are sufferers, or who have recently recovered from one of the infectious diseases upon the specific micro-organism of the respective disorders as manifested,

Links in the chain of evidence for a diagnosis are what we are to expect from the "Widal reaction", it being the most practical for clinical examinations of any of the advanced methods for making a diagnosis. The doctor then spoke of the history of the principle of clumping of agglutination of bacilli which took place outside of the animal body in the test-tube; that we must give the credit to Gruber and Durham for making the first careful examinations and description of the phenomena of agglutination, Great credit was due, however, to Widal, of Paris, who, in June of last year showed that this agglutinating action might be found as early as the first week of the disease, and that the reaction was one of infection.

The doctor then spoke of the effect that the anti-typhoid had upon the blood of patients suffering from typhoid fever; that the facts upon which the serum therapy is based, are that whenever the micro-organisms which are associated with a specific fever are brought in contact with the serum or plasma of an animal or patient who has undergone or is undergoing an attack of

the specific question the following phenomena appear: (1) The bacteria become agglutinated together. (2) The bacteria lose their mobility. (3) The clumps of agglutinated bacteria sink to the bottom. (4) The culture of fluid which was previously evenly turbid becomes clarified. (5) The bacteria shrink up into the form of minute spherules. (6) The bacteria are easily devitalized. That for the purpose of serum diagnosis it is not necessary however, that the whole train of phenomena should come under our observation. It is sufficient if any of these spherules of phenomena come directly under our observation provided however, that we keep in view the facts that the object of our observation is no longer the actual bacteriacidal effect of the serum, but that it is either its agglutinating, immobilising, sedimenting, spherulating, or devitalizing effect. The doctor then spoke of the technique of the "Widal reaction," which must be familiar to every experienced observer. He then spoke of the changes which take place in the blood under the "Widal reaction." He also spoke of some points upon which all observers are agreed, and then drew the following conclusions from a study of the results obtained by the use of the "Widal reaction," in making a diagnosis of typhoid fever, which were as follows:—(1) The test is of undoubted value in irregular and doubtful cases; (2) in patients advanced beyond 60 years of age in which many symptoms point toward pneumonia the presence of the "Widal reaction" will lead us into the light; (3) in hospital practice in which cases are often seen for the first time as late as the second week of the disease the test is of value; (4) we must recognize in the test a valuable aid for the differentiation and rapid recognition of the typhoid bacilli, especially from the colon bacilli with which it is often confounded, and other kindred organisms; (5) the "Widal reaction" affords us additional proof that the Eberth bacillus is the specific cause of typhoid fever.

New Physicians in North Carolina.

The following were licensed by the Board of Medical Examiners, State of North Carolina, at Morehead City June 7 to 12th, to practice medicine:

Clarence Porter Jones, Sterling B. Pierce, Sam'l N. Howell, J. C. Davis, Wm. W. Barrett, A. E. Bell, James H. Hiden, Jas. M. Judd, R. E. Zachary, O. J. Parris, B. T. Bitting, M. L. Justice, Chas. L. Pearson, A. B. Goodman, A. D. H. Whitley, W. J. Weaver, A. C. Bethune, James Sawyer, Reuben A. Campbell, J. Pinkney Turner, Jas. E. Smithwick, Henry T. Batts, Peter John, W. J. Willis, Chas. Roberson, W. W. Dawson, Theodore L. Northrop, James McGeachy, Wm. Isaac Hill, J. B. Person, Jr., L. O. Hayes, H. M. Bonner, Henry F. Kinsman, R. Delmore Patterson, S. P. Holding, J. Brown Wallace, George Kennedy, J. J. Hood, George D. Williams, Jas. E. Brooks, R. L. Savage, C. R. Wharton, G. A. Brown, R. H. McGinnis, William Spicer, M. V. Powell, Avery C. Everett, L. N. Glenn, R. Clinton Bunting, W. P Webb, J. E. David, Jno. Ellis Hart, R. Duval Jones, J. O. Matthews, Stonewall J. Love, F. D. Koonce, Jr., R. E. L. Flippin, G. A. Geron, L. V. Lee, David S. Morrell, P. C. Hutton, Allen H. Wyche, B. R. Hunter, Wm. H. Lippitt.

The Appleton prize for the highest average in all branches, was awarded to Dr. R. Duval Jones, of Newbern.

The prize of the G. H. Harvy Co., of Saratoga Springs, N. Y., a buggy case filled with tablets of their manufacture, for second best average in all branches, was awarded to Dr. Chas. Roberson, of Chapel Hill.

The Wm. H. Armstrong & Co., of Indianapolis, Ind., prize, of Guester-Owen emergency case and sterilizer, for best examination in surgery, was awarded to Dr. Chas. Roberson, of Chapel Hill.

The prize of Lea Brothers & Co., consisting of 4 vols. Hare's Practical Therapeutics, for best examination on practice of medicine, was awarded to Dr. James Sawyer, of Asheville.

The North Carolina Medical Journal prize for best examination in anatomy, pocket case of instruments, was awarded to Dr. R. E. Zachary of Brevard.

The appointment to Wilmington City Hospital, was awarded to R. E. Zachary, of Brevard.

Of the 82 applying, 64 were licensed.

Deering J. Roberts, M. D., Editor Southern Practitioner, Nashville, Tenn., states (original paper, "Nervous Diseases and Treatment"): "Neurosine, not containing Opium, Morphia or Chloral, makes it more commendable, as we all know the dangers resulting from the use of such Hypnotics and Narcotics, and the general unsuitability of drugs of this class in the treatment of all Nervous Diseases. I have found Neurosine so uniformly satisfactory that I but deem it my duty to let others know the benefit I have derived from its use."

The Acute Dyspepsia of Children.

To nourish children suffering from acute dyspepsia is frequently both difficult and unsatisfactory. Cow's milk does not always furnisn the necessary amount of nourishment, and the quantaties in which it must be given to sustain life may overtax the digestive functions and enhance the dyspepsia. A convenient method of modifying milk is, therefore, highly desirable and according to many authorities there is no better way than the addition of Somatose after proper dilution. The manner of feeding dyspeptic children in the pediatric division of the General Polyclinic of Vienna is described by Dr.F.Schramann as follows: In acute dyspepsia in children we administer calomel, and cow's milk with somatose solution in the proportion of 1 :3 every three or four hours. If violent vomiting was present, the cold somtoose solution alone was given on the first day in teaspoonful doses. Under this treatment the vomiting soon ceased and on the second or third day as a rule, the stools were again normal, so that the children could be placed upon their ordinary food. The little patients rapidly recovered from their digestive disorders, so that soon we were able to observe increases of weight of 30 to 40 and even 50 grammes per die. Aside from calomel no other medicament was administered in those cases. In general we avoided administation of drugs in all cases in which there was disease of the digestive apparatus, and confined ourselves to the use of somatose in order to obtain a clear view of its utility, Many cases of chronic gastro-intestinal catarrh were also speedily improved and cured simply by the addition of somatose to the diet.

Chronic Follicular Tonsillitis.

At the annual meeting of the American Laryngological, Rhinological and Otological Society, held in Washington, D. C., on the 1st and 3d of May, 1897, Dr. W. Scott Renner, of Buffalo, N. Y., read a paper entitled "Chronic Follicular Tonsillitis."

He described the condition as a characterized by the formation of plugs of secretion in the crepts of the chronically inflamed tonsils. The plugs may be as large as rice kernels, are from one or two to a dozen in number; the condition may occur in tonsils which are hypertrophied or atrophied. The very chronic condition with which this condition may be confounded is mycosis of the tonsils in which the plugs are more dense, propet-like cox-spurs beyond the surface of the tonsil, and they are very quickly reproduced if removed.

The symptoms vary from a sensation of fullness in the throat to severe pain in the throat, which may extend to the ear or chest, pain in the neck, neuralgia and reversion, other reflex phenomena. This condition is characterized by the occurrence of repeated attacks of acute follicular tonsillitis and peritonsiler abscess due to exposure and increase of the virulence of the micro-organisms contained in the inflamed tonsil. The crepts formed at the upper angle of the tonsil are a frequent source of unpleasant symptoms, during which pain and itching in the external auditory canal are prominent.

The author of the paper reported a case in which an obstruction of a follicle in the upper part of the tonsil produced severe neuralgic pain in the neck and hoarseness, which were quickly cured by destroying the diseased tonsil.

He also stated that many troublesome coughs were due to a chronic follicular tonsillitis.

He concluded his article by stating that the principal indications for treatment are the destruction of the pockets which lodge the secretions, or if we accept the doctrine that the tonsils are diseased tissue complete destruction of all the tonsilar tissue. These objects are accomplished by laying open the follicles by means of a sharp bistury and removing the intervening tissue by means of the snare, etc., or the tonsils should be co mpletely removed by means of the tonsilotomed, cold snare, or galvano-cautery.

The Influence of Diet on the Action of Certain Toxins.

Teissier and Guinard experimented on the conditions which modify the effects of certain bacterial tonics, and found that fasting raised the resistance of the animals to these toxins. Thus, with the toxins of diphtheria and pneumo-bacilli, the first toxic symptoms generally appear much later in fasting dogs than in well-fed ones, four out of twenty-two resisting the toxins absolutely. The post-mortem lesions, also, were invariably slighter in those that died after a fast, and the longer the fast the greater was the resistance. By fasting is here meant a diet sufficiently restricted to modify general nutrition. The explanation is either that (1) the toxins, meeting with starved cellular elements are destroyed by them before they have produced their full effect, or that (2) the action of the toxins is delayed or absent because the starved body is wanting in some substances on which the toxins depend for the production of directly active poisons. The second is the more probable explanation.

Death Following the Passage of a Sound through a Urethral Stricture.

Zuckerkandl, in the Edinburgh Medical Journal, records the case of a man, aged 34, suffering from stricture of the membranous urethra. Two years before he had been under ths author's care for this, and dilatation was carried out by means of bougies. He returned home, and the urinary trouble returning he commenced to introduce instruments himself, often with no other result than the induction of hæmorrhage and fever. When he again came under Zuckerkandl's care the urine contained pus, and the stricture was surrounded by a number of false passages into the corpora cavernosa. After repeated trials a metal sound was passed into the stricture, and a rectal examination showed that it had successfully entered the membranous urethra. After removal of the bougie the patient went home, and was soon attacked with rigors and diarrhœa; collase followed, and he died six hours after the operation. The necropsy confirmed the diagnosed urethral condition, and revealed the presence of fatty degeneration of the heart. No bacteriological examination of the blood was possible. The author classifies the causes of death after the passage of a sound as follows: First, urinary fever (acute and chronic), always due to bacterial infection, usually with the colon bacillus; secondy, reflex inhibition of the secretion of urine, leading to fatal anuria; lastly, in long standing cases of prostatic hypertrophy, where the kidneys are already affected, the slightest operative interference may stir up the latent mischief and lead to death.

"Missed Abortion."

Kossier in (London Lancet) reports three cases which oecurred in his own practice. (1) A woman, aged 30, had had three labours at term, the first seven, the last two, years ago. On July 30th, 1895, she aborted at six weeks with an ovum showing signs of hydatiform degeneration. On January 12th, 1896, slight hæmorrhage; uterus abou size of a two months' pregnancy. From then till February 28th repeated hæmorrhages; uterus on this date almost normal in size and consistence, the internal os, however, being tightly closed. On March 9th violent pains, with passing of clots. Uterus found to be slightly enlarged, cervical canal rigid, the internal os admitting the tip of the finger, which felt a substance which might have been either clot or fœtus. Vagina plugged with iodoform gauze. On March 11th, on removing the plug, the conditions were found to be unchanged, and a "missed abortion" was diagnosed, The ovum was removed by forceps. and was followed by two vesicles about the size of a small nut. Uterus curetted and phenol applied. Uninterrupted recovery. (2) A woman, aged 26, had had one child at term two years previously. Last menses middle of December, 1895. On June 25th, 1896, violent hæmorrhage. *Per vaginam* a complete ovum could be felt, and this was removed by the finger. In the uterus itself there was a hard, fibrous mass, without a trace of villi macro-scopically, about the size of a hen's egg. This, which represented the chorion, placenta, and decidua, was also removed by the finger. The ovum was a three months' fœtus, and must have died about the middle of March, giving no trouble till June 25th. (3) A woman, aged 21, married a few months. Menses last on July 28th. None in August, but in September slight hæmorrhage, which was taken by patient for a return of the periods. This lasted on and off till November 11th, when the discharge became fœtid. *Per vaginam*, just beyond the internal os, a hard round body, about the size of a large nut, was felt adherent to the fundus. This was detached by the finger and removed by forceps. Curetting brought away thiekened fœtid masses of decidual membrane. The ovum had a central cavity, the fœtus having been absorbed. Thus, in the first case, the dead fœtus remained in the uterus from January 12th to March 11th, in the second four months and a-half, in the third six weeks.

Glyco-Thymoline (Kress) in a Case of Follicular Tonsillitis.

O. W. Mayer, M. D., Hamilton, Ohio, writes:

M. E., 15 years old, came to my office and had a fully developed case of Follicular Tonsillitis, both sides being involved by the inflammation. Placed him on constitutional treatment for the fever and on Glyco-Thyline (Kress) as a local treatment, by swabing the affected part with one half strength solution, and ordering him to use a spray (one fourth strength) every 1 or 2 hours.

The next day to my great surprise all the inflammation and the white patches had disappeared—the spray was ordered continued three times a day. In three deys the case was all well and sound. Have treated three cases since that time with uniformly good results.

April 10th, 1897.

Reciprocity in Medical Licensure.

Dr. Willis Warren Potter, of Buffalo, president of the National Confederation of the State Medical Examining and Licensing Boards, chose this for the subject of his annual address at the seventh annual meeting of that body held at Philadelphia, May 31, 1897. He first paid tribute to the memory of Dr. Perry H. Millard, of St. Paul, then in an introduction reviewed some of the essential points of progress that had been made in the state control of medical practice and finally considered his subject.

The Problem.—The most important question now to be discussed pertains to the interstate exchange of licenses and every friend of state control is interested, in establishing this principle. It is one of the objects this confederation is laboring to accomplish, but a most difficult problem for solution. A national registration bureau is desirable where legally qualified and reputable physicians may be recorded—physicians whose names appear on this register to be allowed to pass from state to state in the enjoyment of all privileges pertaining to the practice of medicine. Those chiefly agitating the question of reciprocity, however, are specialists who desire to spend profitable vocations at summer resorts and do not relish the idea of taking state examinations in the localities chosen for their holiday practice. Another class of men, compelled by circumstances to change residence, is more deserving of sympathy: they take the examinations uncomplainingly. Shall a state require of its own citizens a compliance with its practice laws while granting to thrifty summer specialists exemption from their operation? As the state laws forbid discrimination against the inhabitants of each there is both a legal and a moral bar to such exemptions.

Obstacles to Reciprocity.—Equality of standards for admission to the study and practice of medicine is the only enduring basis on which reciprocity can be established. When the several states adopt a uniform level of preliminaries; a uniform period of collegiate training including uniformity of methods of teaching; and finally, an absolute similarity in the methods of conducting state examinations and granting licenses, then reciprocity will be equitably and permanently established. It is important for the State Medical Examiners to come to an agreement on these several points that they may act with intelligence on a common platform. The state imposes a post-graduate examination and none should be admitted to it who are not holders of diplomas legally obtained from registered and recognised colleges. It is understood, of course, that there must be established a uniform system of recognising and registering medical schools in the several states.

The Solution—Legislative Enactments.—The remedies lie in legislative enactments. Those who most loudly and persistently demand interstate indorsement aim their criticisms at examing boards; whereas these have nothing to do with the question. The statutes is states that have established licensure prohibit interstate exchange except between such as have equality of standards. The demands of the restless migratory doctors must be taken to the state legislative halls. Meanwhile, the members of this confederation may assist in bringing the matter to a more speedy conclusion by acquainting their legislatures with the difficulties to be overcome, and by urgently recommending the adoption of such amendments to existing laws as will meet and remove the present defects. Great care must be exercised, however, in the preparation of amendments; the state laws are for the public weal, reciprocity is only for the few. Amendments to existing statutes should be proposed only through State Medical Examining Boards or State Medical Societies; they are familiar with defects and best know the remedies needed. When legislatures can be persuaded to turn a deaf ear to all amendments that are proposed outside of official sources it will be a happy day for the friends of state license. The object of this discussion is to divert further criticism of the delay of reciprocity into the proper channel. If legislators could be made to appreciate the fact that public health interests are involved in the question of state license; that every attempt to weaken the principle is a blow at public sanitation; and that higher standards of medical education mean better health for the people, then perhaps it would be easier to obtain and maintain the necessary laws to protect the commonwealth against that kind of ignorance, superstition, or superrefinement that always lurks in the environment of quackery.

Dr. C. P. Ambler, of Asheville, N. C., has resigned his position as Assistant Medical Director of the well known Winyah Sanitorium. He has opened an office in the Temple Cross Building and will continue the practice of his profession, limiting his practice to diseases of the Eye, Throat and Lungs.

Pseudo Fibroids of the Uterus.

At a recent meeting of the Wisconsin State Medical Society, Dr. Margaret Caldwell of Waukesha, read a paper on this subject:

One form of uterine displacement differs from all others in the particular that there seems to be no connection between the cervix and body, the isthmus connecting the two is the point of weakness. The uterus usually falls forwards resting on the bladder, less often transversely when it makes a twist upon the cervix like a twist in a rope. The displacement changss the vascular supply, a proliferation takes place,the body increases in size, the muscle becomse firm, hard and round, and to the touch has all the characteristics of a fibroid tumor and will ultimately become a real fibroid if the dislocation is not rectified. The cervix is normal in position and to the touch, the isthmus is soft, flaccid and cannot be found in bi-manual palpation. A sound must never be passed for diagnostic purposes on account of the danger of piercing the softened tissues.

If the body of the uterus could be kept in normal position the hardened condition of the body would soon disappear.

How shall we give tone and strength to the weakened muscles, mechanical supports are useless. Apessary would change a simple displacement into a real flexion with cicatrical shortening of one side of the uterus. Astringent tampons are slow and alone are often of no value.

First reposition of the uterus under anesthesia, if necessary, and it will always be necessary if the displacement is transverse, then electricity applied intra-utering every third or fourth day, tamponing between the applications, changing from the Faradic to the Galvanic and from positive to negative, the connection being made through a large electrode over the abdomen for the galvanic and through the hands, feet or spine for the faradic.

A few weeks will usually suffice for strengthening the isthmus sufficiently to allow the uterus to retain its normal position.

Editors Charlotte Medical Journal:

I had a case almost similar to Dr. Reagan's, which he reports in the May number of your Journal,

Wiley A., aged 70, had drank a large amount of "still bear" on Saturday before I saw him on Wednesday. He had not passed water, neither had bowels moved, during that time. I used a metal catheter, but it filled with blood clot. I then used a No. 8 silk catheter, which time after time filled with blood, so that no urine escaped. Being eight miles from home I hardly knew what to do, so I put a Davidson syringe over the end of the catheter and pumped out the clot and urine in large amount. I used an injection in bowel, opened up a new external pile and left him in good condition.

Placing the patient in very hot water, will often relieve retention after catheter has been tried.

Large thick cloths, wrung out of *hot* water, and placed over the bladder, will often start a flow of urine, especially after labor cases.

I always try the hot cloths before using catheter.

Dr. W. C. Greene, Wilkesboro, N. C., once had a case similar to Dr. Reagan's last case reported.

It was a true case of intersusception. Remedies had all failed, He raised the hips and with an old pewter syringe filled the bowel with water. It acted all right and the man recovered.

In one of my cases we had done all we could, but operate, which was opposed. We decided to try one more dose of Epsom salts, which made the boy vomit terribly, during which time his bowels acted freely, but he came near dying from shock.

The best local means for internal piles I know of is

Strong snuff..... ℥ss.
Lard..... ℥iss
M. et. ft. unguent.
Sig.—Apply as needed.

C. C. Hubbard, M. D.

(Dilworth,) Charlotte, N. C., May 27, '97.

Antitoxin's Death Struggle.

A search through our exchanges show (Medical Brief) that the antitoxin fad is losing something of its popularity.

The vanguard of medical science, after an exhaustive test, have rejected it as green fruit, and the stragglers who are just beginning to experiment with it, find themselves very much like men who, going late to a fire, meet the first-comers returning with the news that it was a false alarm.

But for the use of a potent antiseptic like carb olic acid, and the fact that mild cases of diphtheria are prone to recover any way, antitoxin would have succumbed as early as did Koch's tuberculin. But even with these advantages and all the commercial backing it has and the pushing of notoriety seekers, antitoxin is dying a lingering death.

When to Amputate in Preference to the Usual Operations for Lacerations of the Cervix Uteri.

Thomas Addis Emmet, of New York, read a paper with this title at the meeting of the American Gynecological Society, May 5th, 1897. It had been thirty-five years since he had first practised what was known as Emmet's operation for the repair of the cervix uteri. The necessity no longer existed, in this country at least, for the author of it to stand on the defensive. The judgment stood that in appropriate cases better results could be obtained through its agency than by any other operation. It was only in those cases which were exceptions to the rule and could not be cured by preliminary local applications and Emmet's operation that he advocated amputation by the method described in his book and again in his paper to-day. Some women had not the time or the means to undergo the long preliminary treatment required for softening the cervix, etc., in the simpler operation. In others the cicatricial and diseased tissue extended so deeply into the cervix that even prolonged local and general measures (not operative) would not put the cervix in condition so that the lips could be brought together after all diseased portions had been removed. It must not be inferred, however, that he was not as strong an advocate as ever of a conservative course, that of saving the cervix whenever possible. The uterus was drawn gently to the vaginal outlet, held there steadily by an assistant; the arteries thus stretched were narrowed, and the hemorrhage was much diminished. It was important, too, as the excavation went on for the assistant to draw successively upon the tissues to be cut, as in this way the hemorrhage, which otherwise would be excessive, would be slight. The cervix was taken out cone shape. One should not go out as far as seemed safe, otherwise there would be too great retraction and possible injury of the peritoneum or bladder. As the operation proceeded, the bottom of the cavity must be kept at the vaginal outlet. To obviate closure of the uterine canal by contraction of the tissues, and leaving a cicatrizing surface upon the uterine stump, he drew vaginal tissue over the stump from opposite sides and secured it permanently upon its surface. The cervical canal was left fully open. A silver suture was passed from the required point ont on the vagina inward through the stump, stopping short of the central opening; a similar one on the opposite side; others one or more, in opposite surfaces on both sides of the cervical stump, and all were properly tightened after the uterus was first replaced in a normal position. The sutures were removed about the twentieth day. No operation gave better results in cases suitable to it.

Irritable Bladder.

According to Jacobs, the symptoms are, briefly, frequency of micturition, with tenesmus and burning pain in the bladder, associated with healthy urine. It may occur at all periods of life, but is most frequent after the menopause. Often there is some associated disease of the genital organs, such as ovarian and uterine tumors, and uterine displacements; it is frequently found in a first pregnancy, and after the menopause many women suffer from it in whom no uterine or ovarian disease can he discovered. Under all these circumstances, according to the author, there is a hindrance to the venous return from the base of the bladder; the blood from this part of the bladder flows into the utero-vaginal plexus, and when this plexus becomes blocked by pressure of a neighboring tumor, by displacement of the uterus, or by senile atrophy of the uterine vessels, congestion of the base of the bladder results. This congestion may always be recognized with the cystoscope, and in the worst cases the veins of the mucosa become distinctly varicose. Clinically the condition may be diagnosed by the marked tenderness of the base of the bladder to pressure by the finger through the anterior vaginal wall; the posterior part of the urethra is also often tender in these cases.

The following illustrative case is quoted in (London Lancet).—Mme. X., aged 56, 4 para, menopause at 48, had suffered for several years from gradually increasing vesical tenesmus. There was constant desire to micturate, and severe burning pain in the bladder followed the act. The urine was healthy, there was no stone or foreign body in the bladder, and the genital organs showed the usual post-climacteric atrophic changes, Pressure on the base of the bladder through the vagina caused great pain. The urethral mucosa was normal. The cystoscope showed marked congestion of the base of the bladder.

In treating this condition the author condemns local methods, such as irrigation and the direct application of remedies to the mucous membrane. No improvement is obtained by these means. If any uterine or ovarian disease exists this should be first

treated, and if it can be removed the bladder symptoms will disappear. Thus some cases are readily cured by a pessary, But the most difficult cases to deal with are those in which no morbid condition can be detected outside the bladder. Here the author recommends massage of the painful area of the bladder, combined, if necessary with the constant electric current. Massage is performed with the index finger in the vagina, gently rubbing the bladder wall for several minutes against the posterior surface of the pubis. This treatment is at first extremely painful, and the patient must be allowed a prolonged rest afterwards. The tenderness, however, quickly diminishes, and the condition is generally cured by 5-6 sittings. If massage alone does not suffice, the constant current applied to the "summit" (? internal end) of the urethra quickly effects a cure. The author claims to have cured a large number of cases by this method.

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†Facts Relative to the Treatment of Diseases of the Upper Air-Passages.

There is probably no part of the human body that has been so abused and maltreated (viewed from a pathological standpoint) as the upper air-passages. Every possible malodorous irritant sold under the guise of an antiseptic powder or solution has been blown, syringed, douched, and sprayed into these cavities, and as each year brings forth a new crop of antiseptics, the attack is renewed, until physicians become discouraged and declare that "Catarrh cannot be cured."

So long as we treat symptoms, nothing but failure can result. I have frequently had patients referred to me stating that they had used Seiler's tablets, listerine, etc., and as they did not recover, by inference I would understand that they thought theirs must be very stubborn cases. The absurdity of supposing that a mere cleansing solution ever cured any form of catarrhal inflammation of the upper air-passages can be appreciated by one making a specialty of these diseases.

A very large percentage of the diseases of the upper air-passages are incited by adenoids, and while this condition is perhaps often secondary to nasal obstruction, it is, nevertheless, manifest that this inflammatory condition will not subside even when the nasal obstruction is removed. Therefore the removal of post-nasal growths is imperative; not only growths but adenoid hypertrophies should be just as surely and as thoroughly removed, and, say what we will operate requires a thorough knowledge of the anatomical relation, and skill in the use of the instruments designed for the removal of this hypertrophic tissue, growths etc. Hypertrophied tonsils should be removed by the amygdalotome, and to be successful must be thorough, so that no fragments protrude beyond the pillars of the soft palate.

Of the diseases affecting this region due to a constitutional condition might be mentioned, first, atrophic rhinitis. A very large percentage of the patients afflicted with this disease succumb to tuberculosis sooner or later, and of those who do not, their prolongation of life may be attributed to favorable hygienic and sanitary environments; also to faithful and careful cleansing of the parts and keeping the physiological action of the nose in as perfect condition as possible. The best method of doing this is the daily use of the syringe with pure hot water. The syringe manufactured by Tiemann & Co., with a short nasal tip for use in the anterior nares, with a shifting shield which has a post-nasal tip also, is one that can be relied upon for thorough cleansing of the nasal lumen and post-nasal space. Not only is this plan of treatment beneficial in removing putrid secretion, but the warmth, irrigation, and massage have an influence in equalizing the circulation and restoring the lost nerve power. As a means of giving rest to these overwrought, worn, and exhausted parts, after such cleansing, it is desirable to find some remedy that will physiologically put the parts in splints. This I believe I have found in the following prescription:

R Powdered thiol.....gr. x;
Menthol.....gr. v;
Liquid blancolin.....℥ j.
M. Sig.: Apply three or four times a day by means of an oil atomizer.

This proves of still greater benefit if it can be used as hot as possible consistent with the comfort of the patient.

I was led to make a trial of thiol because of the good results I had obtained in some forms of skin diseases I had treated with this remedy, and I had also found it beneficial as an air-tight dressing in fresh wounds. The foregoing prescription I am using with very satisfactory results after operations within the nasal lumen.

Constitutional diseases connected with the upper air-passages commonly met with, next in importance to the foregoing, are syphilis and cancer. In the former we have a disease that is surely amenable to treatment, and a favorable prognosis can almost invariably be given if the physician can have perfect control of the patient. Iodide of potassium and the mercurials are almost

specifics for this disease, wherever found, if handled with intelligence.

In the treatment of the latter disease (cancer) the reverse is true. There is no known specific or even remedy that exerts any marked control over this disease. Inoculations with erysipelas cocci seem to to have a favorable influence for a time, but it is soon lost; so that the early and free use of the knife is the only plan of treatment promising any results.

In the cancerous cachexia, the strumous and tuberculous diathesis as an aid to any plan of treatment that may be adopted, there is no remedy that I value more highly than calomel in doses of a tenth of a grain three times a day for say one or three weeks. Calomel acts as an alterative, but its greatest benefit, I think, is in its ability to increase the eliminative powers, thus relieving the system more rapidly of deleterious matter. The judgment of the physician must be relied on as to the patient's idiosyncrasies in adopting this plan of treatment.

In conclusion, I wish to speak of acute inflammation of the parts which this paper mentions. These, as a rule, are of two varieties—traumatic; or from nerve shock, due to exposure, so-called "taking cold." In either case the following prescription will almost prove a specific:

℞ Eucaine..... gr. x:
Cocaine hydrochloride.... gr. x:
Aquæ..... ℥ vj.
M. Sig: Spray every hour in the nose sufficient to be felt in the throat.

If the patient is taught to inhale while using this spray, so that the solution may be carried well within the larynx, it is far more beneficial than it otherwise would be. The advantage of this combination is, that while cocaine is a valuable remedy of itself, the danger has been the liability of the patient to become addicted to its use. By the combination of eucaine, which is not a thorough local anæsthetic in the nose, the nervous excitability produced by cocoaine (intoxication) will not be produced, thereby making this prescription one perfectly safe, as nobody will contract the cocaine habit by using this combination. I would recommend the abandonment of this spray after the third day, and instead the use of the thiol formula until entire relief is obtained.

Bacteria in Ink,

It sometimes happens that a trifling scratch or puncture made with a pen gives rise to dangerous septicæmia. The chemical constituents of the ink which are introduced by the pen into the wound are not capable of producing septicæmia, but microscopical examination proves that the ill effects are due to the liability of ink to contain pathogenic bacteria. According to the Berlin correspondent of the Lancet Dr. Marpmann, of Leipsig, has recently published the results of the microscopical examination of sixty-seven samples of ink used in schools. Most of them were made with gall-nuts, and contained saprophytes, bacteria and micrococci. Nigrosin ink, taken from a freshly opened bottle, was found to contain both saprophytes and bacteria. Red and blue inks also yielded numerous bacteria. In two instances Dr. Marpmann succeeded in cultivating from nigrosin ink a bacillus that proved fatal to mice within four days. This ink had stood in an open bottle for three months, and the inference to be drawn from the inquiry is that ink used in schools should always be kept covered when not in use.

Etiology of Follicular Enteritis in Children.

Finkelstein, in the British Medical Journal, states that it is universally admitted that the majority of cases of gastro-intestinal enteritis are due to an infection. The source of the infection lies in the stools. Two groups of the disease are to be distinguished, the dysenteric and the toxic. The actual cause of the disease must therefore be able to give rise to irritation of the mucous membrane, and to produce toxic products. The bacteriological examination of the purulent masses in the author's cases showed the presence of abundant rod-like micro-organisms contained in the pus-cells, and varying much in appearance. Often they are arranged in twos. All the different forms were shown to belong to a single micro-organism. By cultivation a microbe possessing extraordinary resemblances to the B. coli communis in almost pure culture was obtained. The author then details his inoculation experiments. In mice it produced, when introduced with the food, a disease very like Lœfflers mouse typhoid. The morbid appearances corresponded exactly to those described by Heubner as taking place in the epithelium in cholera infantum, but ulcerative processes were absent. The micro-organism is only present in the glands, and hence the death of the epithelium must be due to a toxic action. The bacillus is also able to produce remote toxic effects. Growth on potato showed differences from that of the B. coli, otherwise the differences were rather those of degree than of kind. Experiments on animals yielded important results. Virulent cultures of the B. coli communis were

shown not to be able to act pathologically on healthy mucous membrane. A close relationship existed between the bacillus in question with the bacteria known to produce the manifestations in meat poisoning Thus it does not appear correct to class this micro-organism as the B. coli communis. The virulence of the micro-organism varies greatly, and can be diminished by culture. As regards its pathogenic properties, it was found constantly present in over fifty cases of typical enteritis and colitis dysenterica. All cholera-like forms must not be grouped as follicular enteritis. If the microbe has lived and flourished in the milk consumed, the symptoms of intoxication may begin forthwith. It may be said that follicular enteritis passes through the stages of dyspepsia, intestinal catarrh, up to a cholera-like disease. When the intestinal epithelium is destroyed, the bacillus may get into the blood stream and produce a septicemia as well as hemorrhagic purulent metastases. Mixed infections are common. There are two forms of the general infection: one resembling typhoid, and the other giving rise to high fever, collapse, and rapid death. Adults rarely suffer, although the bacillus has been found present in the intestine.

The New Tuberculin.—"Koch."

The *Deutsche Medicinische Wochenscrift* contains a detailed account of the investigations on the treatment of tuberculosis with which Professor Koch has been engaged since his first publications on the subject appeared in 1890. In the introductory part of his paper Professor Koch makes some general remarks on immunisation, saying that—unlike cholera, typhoid fever, &c., which confer immunity against subsequent attacks—an infection by the tubercle virus predisposes to new attacks of tuberculosis. But there are nevertheless indications that under certain circumstances an immunisation may take place. These circumstances are present in the experimental tuberculesis of guinea-pigs and in the general milliary tuberculosis affecting the human subject, where at a certain stage the bacilli completely disappear. Immunisation is therefore apparently attained when the whole body, as in general tuberculosis, is invaded by great masses of tubercle bacilli and when these bacilli come in direct contact with normal tissue. Professor Koch accordingly endeavoured to produce analogous bodily conditions in the hope of arriving at artificial immunisation. He first experimented by extracting tubercle bacilli with decinormal caustic soda. The fluid obtained in this way was not free from bacilli, for in a field of the microscope there were from five to ten of them to be seen, lying separately, not in heaps; they were, of course, dead. This Preparation is designated as TA (i. e., Tuberkulin, Alkalisches), and produces when administered reactions quite similar to those of the old tuberculin of 1890; relapses were, however, less frequent. But there was one drawback: when more than a certain dose was given suppurasion occurred at the place of injection, the abscesses being due to the presence of dead tubercle bacilli in the preparation. The fluid was therefore filtered and the bacilli completely removed; when this was done suppuration was avoided, but the action of the TA was still identical with that of the old tuberculin of 1890. As moreover, the fluid was easily spoiled and required constant firesh preparation, Professor Koch finally abandoned the TA and proceeded to other experiments. Having found that normal tubercle bacilli are not easily absorbed by the organism, he endeavoured to facilitate their entrance into the body by mechanical means. He has made the very interesting discovery that the bacilli are covered with a layer of a fatty acid which makes their absorption difficult, and which must therefore be previously removed. This he accomplished by triturating dried cultures in an agate mortar. After some time only a few bacilli remained entire, and they were got rid of by dissolving the mass in distilled water and treating the solution in a powerful centrifugal apparatus. In this way the fluid was divided into two layers: (1) an upper one not containing any tubercle bacilli and designated as TO (i. e., Tuberkulin, Oberst); and (2) a lower one which consisted of a colloid sediment with a few bacilli, and was designated as TR (i. e., Tuberkulin, Rest). The TR was then again dried, pulverised, and treated as before in a centrifuge, the process being repeated till the last bacillus was destroyed and the whole fluid became perfectly transparent. This product caused no suppuration and was easily absorbed. The action of TO is very like that of the old tuberculin and the TA, with the exception that it does not cause suppuration. Its immunising action is very slight, whereas that of the TR is very marked. When an excessive quantity is administered to tuberculous patients it, of course, sets up reaction, both local and general, but its immunising effect is quite independent of this; whilst with the old tuberculin and with TA and TO reactions are necessary for an immunising effect. Such reaction must be avoided in TR. A man immunised by TR does not show any reaction when he is treated with TO and

TA, so that he is immunised against every constituent of the bacillus. For the preparation of TR the most virulent and recent cultures must be used. The processes are very dangerous owing to the fact that living bacilli of high virulence have to be pulverised in an open mortar; indeed, Professor Koch felt as anxious as if he had to do with an explosive substance, and he points out that in making tuberculin on the large scale every care must be taken to prevent the bacilli from being scattered about, adding that this can only be done in a large factory. The Hoechst factory (Farbwerke vorm Meister, Lucius and Bruning,) has been entrusted by him with the preparation of the TR. In making use of the TR it is administered by injection into the back with a well sterilised Pravaz syringe. One cubic centimetre of TR, containing 10 milligrammes of the dry substance, is mixed before use with weak sodium chloride solution 0.6 per cent., and in the first injection $\frac{1}{300}$ milligramme of the substance is given. Injections are to be made every second day, and the dose is progressively increased until it amounts to 20 milligrammes. When the temperature rises the injections must be stopped for some time. Guinea-pigs treated in this way were so completely immunised that injections of virulent cultures had no effect on them. When TR was administered after an injection of tubercle bacilli a marked regressive metamorphosis of the tuberculous organ was observed. Full immunity is only attained two or three weeks after the administration of the maximum dose both in the case of the lower animals and in the human subject. In the beginning of the treatment there is no apparent effect and no impression is made on the tuberculous state until half a milligramme or one milligramme has been given, so that patients who are likely to live only a few months should not be subjected to the treatment. Also patients suffering from secondary infection by streptococci and those in whom septic processes complicate the tuberculous affection will not derive any benefit from it. Temperatures exceeding 38 deg. C. (100.4 deg. F.) indicate a mixed infection and thus render the patient unfit for TR treatment. Professor Koch has administered the TR to a graat number of patients, especially sufferers from lupus, and in nearly every instance an improvement occurred—he did not say a "cure," because the time during which a relapse might take place was not yet past. In lupus it was especially remarkable that, notwithstanding a very small local reaction, the disease became less. This result is the reverse of that which was found to occur with the old tuberculin, where the therapeutic effect depends on the degree of the local reaction. In pulmonary tuberculosis the only local reaction observed after the administration of TR was a temporary increase of the catarrhal symptoms. After a few injections the sputum decreased in quantity, and at last disappeared. In no instance did the general health suffer, nor were any undesirable symptoms observed. The patients' weight increased, and their temperature remained normal. Professor Koch concludes that probably the methods of administration may be improved, perhaps by combination with serum; but he thinks it will be impossible to improve the preparation itself.

Researches on the Pathogenesis of Rachitis.

Smaniotto Ettore, (British Medical Journal) after reviewing the more important work done in this line, the author gives the results of his own experiments, Ettore repeated the work done by Mireali, who found from cultures made from the pulp of rachitic bones *Staphylococci* and *Streptococci pyogenes*, and concluded therefrom that rachitis was an infectious staphylo-streptococci osteitis. Ettore made bacteriological examinations of the epiphyses of rachitic and non-rachitic bones during the months of December, January, February, and March, besides one case in September and one in October. He also studied during May, June, and September, twelve cases of non-rachitic bones. *Technique.* He cauterized a large surface of the anterior extremity of a rib and penetrated the interior or cartilaginous tissue with a sterilized pipette and aspirated. He made cultures on gelatine plates and large agar tubes. In most cases, by the same procedure, he cultivated the marrow of the diaphysis of the bone. He endeavored always to have the same quantity of substance. He selected ribs and clavicles because they were more readily obtained. In the rachitic cases he chose bones in which the lesions were evident to the eyes. In the sound bones examined there was no trace of rachitis, He made twenty-five examinations in the bones of non-rachitic children. In sixteen of these the inoculations remained sterile, six cases gave pure cultures of streptococci, two gave the *Bacterium coli communis*, and one case gave few colonies of *Staphylococcus pyogenes albus*. In the six cases showing streptococci, four were from children dead of diphtheritic angina associated with the streptococci, the fifth was in a child dead from a cystic scarlatina, and the sixth from a fatal case of broncho-pneumonia; in the last case

the colonies were few. The author believed that a streptococcemia, in which one of the localizations had been the bones, especially the epiphyses, had existed during life. There were no other appreciable lesions of the bones. The two cases in which he found the *Bacterium coli communis* had died of very grave measles complicated py bronchopneumonia and acute enteritis, and from this he infers that the bacilli were present as the result of an infection by this organism during life and were not the result of invasion after death. He concludes from these observations that in septic conditions in children the microbes readilly invade the bones, that they are found in the long bones and especially in the epiphysis, and that in a child the *Bacterium coli communis* and other bacteria inhabiting the intestine very rarely, if ever, invade the bones in the first 30 or 35 hours after death.

Syphilis of the Heart.

Grassman (Lancet) maintains that when syphilis of the heart is said to be uncommonly rare, this really applies to gummata in the heart. The recognition of cardiac syphilis during life is only rarely possible. A gummatous pericarditis hardly ever occurs, but a pericarditis may be present over a gumma in the cardiac wall. The same applies to a syphilitic endocarditis. Gummata of the heart vary in size; they may be of microscopic size, or even as large as a chestnut. The gumma may soften, or be converted into a hard mass owing to the proliferation of the intestitial tissue. A result of softening may be an aneurysm of the cardiac wall. The author refers to a case of a woman, aged 38, who died of cardiac insufficiency. There was a large gumma at the apex of the ventricle, an aneurysm filled with clot on the anterior ventricular wall, and an aneurysmal bulging of one mitral cusp towards the auricle. There was also a defect in the ventricular septum, apparently due to the absorption of a gumma. Gummata are usually placed in the left ventricular wall. It would appear that a syphilitic myocarditis may occur without any gummatous formation, and Ehrlich would attribute it to disease of the minute vessels. Cardiac syphilis is a late manifestation of syphilis, but very rarely it has been known to occur within the first two years. Cardiac symptoms may occur in the earlier stages of syphilis, and the author refers to a research of his own not yet completed where varying symptoms of cardiac disturbance were noted in early syphilis. As regards later cardiac syphilis, there are no pathognomonic signs. Symptoms of cardiac insufficiency, with œdema, arhythmia, dyspnœa, etc., have been noted. Only in the rarest cases have there been symptoms of a typical valvular lesion. Sudden death may occur. Thus, in Mracek's 63 cases, death took place unexpectedly in 21. The presence of cardiac syphilis can be ascertained only in an indirect way, such as an early infection, the ineffectiveness of any other than antisyphilitic treatment. Antisyphilitic treatment cannot remove a fibrous myocarditis or arteral disease, but it may be of value before such lesions have become advanced. Gummata can, of course, be absorbed, but a rapid absorption may even lead to aneurysm of the heart. The treatment should be a mild and extended one, for a vigorous antisyphilitic treatment where gummata are present may be harmful. The author concludes with the statement that syphilis does not spare even the heart.

Serum Diagnosis of Typhoid Fever.

Widal and Sicard according to the British Medical Journal have tested the agglutinative action of serum taken during the fever, during a relapse, or duing convalescence in 21 cases of enteric. They find that (1) if different proportions of the serum are added to broth cultures of the bacilli incubated for one or two days, successive microscopical examinations show that the limit of the agglutinative power is reached after one or two hours; (2) macroscopically the clearing of the broth culture mixed with the serum is perceived only after several hours in the incubator; (3) the serum keeps its power for several days—an important point as regards sending specimens of blood for examination; (4) while in mild cases the agglutinative power may be slight, yet the extent of the reaction is no index of the severity of the case; (5) the curve of the reaction traced through the whole course of the illness is a variable one; it is sometimes slightly marked at first, and increases progressively, or it may remain the same all through? as a rule it diminishes more or less rapidly during convalescence, or even during defervescence, sometimes with remarkable rapidity, but exceptionally it lasts for months or years; (6) it is, therefore, essentially a reaction of the infective period, and cannot be, as is often supposed, a reaction of immunity. Agglutination caused by the serum of artificially immunised animals was first described by Charrin and Roger, and is quite distinct. The authors, in fact, introduced serum diagnosis after discovering this distinction.

Tubercle Bacilli in Milk.

Ilkwitch ("Muncher Medicinisch Wochenschrift") describes a new method for the detection of tubercle bacilli in milk, which is founded on the fact that tubercle bacilli will be precipitated by rapid centrifugal motion. He uses a modified lactocrit, which has 3600 revolutions a minute. Twenty com. of milk are coagulated by means of dilute citric acid. The whey is separated by filtration. The casein is dissolved with phosphate of soda solution. To this are added six ccm. of sulphuric ether, mixed with water, in order that the emulsified fat corpuscles may be set free. The action of the ether is hastened by shaking the mixture in a glass cylinder for fifteen minutes. The solution is allowed to stand, and after the fat has separated, the remainder of the liquid is allowed to run out. Dilute acetic acid is added to this until the first sign of coagulation. It is then transferred to the lactocrit, and the machine set in motion for fifteen minutes. The vast majority of the bacilli then sink to the bottom. This deposit is then conveyed to two slides, stained and examined with an oil immersion. If bacilli were present in the milk they will be found almost surely in this precipitate. The author considers this method more certain than the inoculation of animals with the suspected milk.

The Clinical Value of the Culture Products of the Bacillus of Tuberculosis.

Dr. Karl von Ruck, of Asheville, N. C., presented a paper with the above title of the Congress of American Physicians and Surgeons in which he said that the tubercle bacillus produces substances in the culture which are antagonistic to its life and growth, and that the germs cease to grow and die because of the presence of such peculiar substances. The bodies of the germs contain fats which can be extracted with ether or alcohol, and when the fat is removed they lose their properties of retaining the aniline stains. After removing the fats the author has extracted them further and practically reduced them to a small residue, consisting of cellulose. The extractive substances produce immunity in guinea pigs, and act curatively also. The degree of such action appears to stand in relation to the amount administered. The purified products of the culture, especially such as Klebs has produced, have given the best clinical results, and several cases are reported illustrative of their action and limitations. In suitable cases, especially the earlier stages, the percussion dullness disappears in newly involved area, and the respiration becomes again vesicular, with corresponding general improvement. Their use is not attended by any danger or discomfort to the patient It was not contended that these remedies should be used to the exclusion of all other valuable means. On the contrary the author stated that in the treatment of phthisis we are necessarily confronted with complex pathological changes, the results of tuberculous disease, all of which it could not be hoped directly to influence by remedies which were directed against the tubercle bacillus itself. Other factors, such as climate, had to be considered in the question of treatment. The author has also produced a serum from goats, after the method of Maragliano. In a comparative experiment both his and Maragliano's serums acted alike in effect and degree, protecting the guinea-pigs from the usually fatal dose of toxins. Some of these goats are now being further immunized with the extract of the tubercle bacillus, but neither serum nor extract has been used in the systematic treatment of human tuberculosis as yet, and they are still under experimental investigation.

On the Action of Arsenite of Copper in the Acute Infectious Gastro-Intestinal Catarrhs of Infants.

H. Kruger in Practitioner reports a number of cases in which the preparation had a wonderful effect. In a child nine months old, suffering from diarrhea and vomiting, with an emaciated body and a senile face, cold skin and dull eyes, the least nourishment was either vomited or passed undigested through the intestinal tract. A 0.001 : 100 solution of arsenite of copper was given in teaspoonful doses every ten or fifteen minutes. Besides this a teaspoonful of iced milk was given every half hour. The child improved wonderfully, and on the following day had recovered from the most dangerous symptoms; the vomiting had at once ceased, and the diarrhea was checked soon after. The favorable action of the copper in this case induced him to try it still further, and he later prescribed it in powder form with sugar of milk, ordering 1-500 of a grain every hour. Of the many casef treated by him he reports three, in which the action was marvelous, and two cases which died from extreme exhaustion, although the arsenite of copper benefited both the vomiting and diarrhea.

The action of the remedy is undoubtedly that of a bactericide, as is shown by the rapid improvement in the general condition

and the prompt cure of the acute gastro-enteritis. In more chronic cases the results were not quite so satisfactory. The bactericidal power of the drug must be enormous, for in most cases 1-60 of a grain in twenty-four hours was sufficient to relieve the dangerous symptoms, and rarely was it necessary to give more than twice this amount, and never more than three times during the course of the disease.

The Surgical Treatment of Perforative Peritonitis in Typhoid Fever.

Monod and Vanverts after a careful study of published stastics, have formed the following conclusions with regard to the operative treatment of perforating typhoid ulcer: (1) The results of surgical intervention in cases of diffused peritonitis consequent on intestinal perforations of typhoid fever are not very encouraging; (2) as, however, this lesion, if left to itself, is almost certainly fatal (95 per cent, of fatal cases), it is justifiable to ressrt to an intervention the general results of which (88 per cent. of mortality) are better than those of expectation; (3) the prospects of operative treatment are less unfavourable when the perforation has occurred at a late stage of typhoid fever, and particularly during convalescence or at the end of a relapse. The surgeon, however, may act at any period of the fever at which the perforation is produced, provided there are no distinct contra-indications presented by the general condition of the patient; (4) the operation should be performed with the least possible delay, a condition of success which may be taken advantage of as an immediate diagnosis of perforation is possible in most cases; (5) the results of surgical intervention, and more particularly of suturing, are excellent with regard to occlusion of the perforation, but, on the other hand, are unfortunately less favourable with regard to the survival of the patient; (6) the causes of the almost constant failures are multiple, the most frequent being persistence of the intensely septic peritonitis, occurrence of fresh perforations, and extreme exhaustion of the patient; (7) this last condition should in certain cases constitute a contra-indication to surgical treatment. If, in fact, the patient seem too exhausted or collapsed to be capable of bearing an operation, it would be well to abstain; (8) surgical intervention would in most cases consist in median laparotomy and simple suture of the perforation. Intestinal resection and the formation of an unnatural anus would be reserved for cases in which the lesions are more or less complicated; free irrigation and drainage would complete the operation; (9) in a case of encysted peritonitis, the frequency and severity of which lesion are less considerable, the surgeon should restrict this intervention to simple incision over the seat of disease, in order to effect evacuation of the pyo-stercoral accumulation. It might under such circumstances be possible to recognise the perforation, and to close it by suture.

Intussusception in Children.

In the Quarterly Medical Journal for January, Dr. Pickering Pick presents a suggestive paper on this subject. He is an advocate of the method of inflating the bowel by air and not by fluid, considering that the latter is too dangerous in many cases. If the child be inverted at the same time as the inflation is made, the prospects of success are considerably greater according to Mr. Pick. If the invagination is reduced the surgeon will feel the tumour disappear suddenly from under his hand, and the air will become diffused over the whole intestinal tract. Mr. Pick attaches more importance to this sign than the disappearance of the tumour, as he says that the latter is very liable to mislead, since it frequently happens on inflating the intestine that the air causes a change in the position of the tumour and it disappears from under the hand without the invagination being reduced. With regard to inflation by means of fluids, Dr. Pick advocates that the "head" of fluid should not be more than three feet. That this is safe was experimentally shown by Mr. D'Arcy Power in his lectures at the Royal College of Surgeons in February. Should inflation of the bowel by air or by salt solution fail, then operative measures are necessary. In recent cases it is sometimes possible to reduce the intussusception within the abdomen, and then a very small incision only is required, and the coils of intestines not affected should be carefully protected by means of large sponges. But too often this line of treatment fails, and the intussusception is found to be in a state of incipient gangrene. There are then three plans which may be pursued. 1. To make a longitudinal incision into the intussuscipiens and draw out the intussuscepted knot, cut it off, and suture the intussusceptum and intussuscipiens. 2. Resect the invaginated portion of gut, snd do an "end to end" anastomosis of the two cut ends of the gut. 3. To form an artificial anus. The last method is a relic of past times and does not now call for consideration. The first measure is best carried

out by Maunsell's method of suturing the intestine. A longitudinal incision is made in the intussuscipiens. Through this is made to protrude by gentle traction the intussusceptum until its neck appears outside the opening in the intussuscipiens. The base is then transfixed with two fine straight needles armed with horsehair, and the intussusceptum is amputated a quarter of an inch above the needles, leaving a stump beyond them. The needles are now pushed onwards so that the sutures pass through the invaginated bowel, and the horsehair is then caught up and divided in the interior of the bowel, and the two ends tied on either side so as to unite the intussusceptum and intussuscipiens. These ends are left long, and used as retractors to prevent the stumps slipping back while rows of sutures are being placed through the two cut surfaces of the bowel and tied. This having been done they are cut off short, the stump is pushed back into the bowel, and the longitudinal slit closed by a Lembert's suture. The second plan consists in excising the invagination and a wedge-shaped piece of the mesentery and approximating and uniting the two cut ends of the bowel. This is the old familiar operation of end to end anastomosis, and the cut ends may be united by sutures in many different ways, of which perhaps Maunsell's is preferable.

Typhoid Fever.

William Squires, M. D., says, (Congress of American Physicians): The utility of the Widal test was acknowledged, with cautions as to its use. Dr. Janeway, of New York, had in one case negative up to the 28th day of the fever. Dr. Lawrence Magon, of Boston, described a case of inflammation of the gall bladder as a complication; tension and pain, vomiting, and intestinal perforation occurred; aspiration was practiced; the patient recovered after resection of the gall bladder. Dr. William Osler, of Baltimore, read a paper on the "Hepatic Complications of Typhoid Fever" Jaundice was rare; in the first five hundred cases seen by him at the Johns Hopkins Hospital it had been present in only two cases. "In fourteen cases of gall-bladder disease that were fatal, the typhoid bacillus was found in seven cases and other organisms in two. In these seven fatal cases there were no hepatic symptoms. Dr. Councilman, of Boston, spoke to the frequency of 'typhoid bacilli' in the gall-bladder. They are nearly always found in typhoid fever. They enter the gall-bladder from the blood. They are always in the liver during the disease." Blackstein at the Johns Hopkins Hospital had shown that the bacillus lived fifteen and one-half weeks in the billiary passages. It was very generally assumed that relapses were re-infections, and Dr. Mason concluded that the gall-bladder may be a source of infection as well as a re-infection. This was not Dr. Irvine's view of relapses, nor that of the late Dr. Moxon; nor do they result from too early feeding or change of diet.

Intestinal Obstruction Relieved by Abdominal Massage.

Dr. George Reid, in The British Medical Journal, relates the case of a girl aged 10 who, while straining at stool, was suddenly seized with acute pain in the right side of the abdomen, which was followed by persistent vomiting for eighteen hours. There was then pain and great tenderness over the ascending colon, which were treated with some relief with opium and belladonna and hot fomentations. The next day the abdomen was less tense, and a mass could be felt in the position of the ascending colon. A copious enema was given, but without result. On the fourth day she was not so well, and gentle massage with the flat of the hand was performed, and after about ten minutes there was a sudden gurgle, and the patient became faint, and a few hours afterwards there was a copious offensive motion, not containing any hard masses, and the patient made an uninterrupted recovery. It is hardly necessary to say that this method is only applicable without danger in a small number of cases. Where the abdominal walls are still tense, or there is continued vomiting, the procedure would be extremely risky, and liable to cause rupture. Repeated enemata, cautiously given, would probably be equally effective and much less hazardous.

Habit Chorea.

In a very interesting article in the American Journal of the Medical Sciences, Dr. W. Sinkler brings out the following point: In cases of long standing it is not sufficient merely to get rid of the cause, for the nerve centres having acquired a vicious habit do not recover their normal condition until systematic treatment has baen pursued. This is especially observable in those cases in which habit chorea has resulted from an error of refraction. The experience of de Schweintz and Thomson at the infirmary for Nervous diseases, Philadelphia, coincide

with the author's in this respect. It has been found that medical treatment alone seldom arrests the choreic movements. On the other hand, mere correction of the refraction does not cure them. It is necessary therefore, first to correct the ocular defect, either by glasses or tenotomy, and then to pursue a course of medicinal treatment. The same statement applies to those cases in which nasal or throat disease has been the cause of the affection. In nearly all cases the general health is at fault. The patient is anemic, or he is run down from overstudy, improper food, or some attack of illness. The point of first importance, then is to look carefully after the general health. Tonics, more especially chalybeates, should be administered, and, if possible, change of air is to be obtained. In school children it is usually necessary to stop study for a time. The one drug which seems to exert a special influence upon the disease is arsenic, and it should be administered in the same manner as in the treatment of chorea minor. It is seldom of value when given in small doses, but it should be administered in gradually ascending doses until some toxic influence is observed.

Decay of the Practice of Drainage.

Clark in the Am. Jol. of Obstet., brings forward clear clinical and scientific evidence which tends to support the growing mistrust of the drainage tube in abdominal surgery. Mechanically it is not to be trusted. Its presence handicaps the peritoneum in three ways: The normal peritoneal currents are disturbed, so that the circulation of fluids and foreign matter towards the diaphragm is retarded. An active inflammation is set up about the drain, limiting and impeding the action of the peritoneum. Thirdly, within a few hours the general peritoneum is cut off from all participation in the work of absorption by the wall of adhesions around the drain. Sinuses and hernia not infrequently follow the use of the tube. Infection through the tube may undoubtedly occur. Hunter, Kopp, Kelly, and others report badly of the tube after long experience. Kelly tried the Mikulicz gauze bag in 40 cases, but it proved little more effective than the simple gauze within the tube. The pieces of gauze within the tube were easily removed, but the gauze bag itself was often difficult to extract, and, except that it checked oozing more effectually, was not superior to simple gauze. Lastly, in the Johns Hopkins Hospital, the great frequency of the infection of drains, as demonstrated by the bacterial examinations and the rarity of living pyogenic organisms in the diseased structures, has caused the almost complete abandonment of drainage as a means of removing infectious matters from the peritoneal cavity.

Adulteration of Condensed Milk.

The Editor of "Treatment" makes the following comments on the subject:

The convenience and cheapness of condensed milk, and its supposed better keeping properties, have led to its very wide use in spite of the serious drawbacks to its use as a staple article of food for infants. That even the best brands often do great harm by interfering with proper nutrition, and favouring the development of rickets and scurvy, is well established. And this being true of brands that are prepared by the concentration of cow's milk of good quality, it may be imagined that a much more serious indictment could be brought against some inferior kinds in the market. The mysteries of composition of these have not yet been satisfactorily revealed, but it is known that milk is by no means the only ingredient. The writer has it on good authority that at the present time a vegetable article is being largely imported, and being bought by certain milk manufacturers for the purpose of adulterating their wares. The adulterant is known commercially as the "Tiger Nut," and has the appearance of a rhizome, is no larger than the last joint of the little finger, and resembles a diminutive root artichoke. It is not unpleasant to taste, the flavour being strongly suggestive of condensed milk. It is possible that in this ingredient we have the explanation of some cases of condensed milk wasting and dyspepsia. It is stated that "it is only used in the preparation of some of the cheaper brands."

Cerebral Abscess due to Ear-Disease.

Grunnest, says the British Medical Journal, observes that the prognosis after operation is not as good as might be expected.

(1 Because these abscesses are not infrequently multiple (20 per cent.)

(2) Because of the difficulty in making a correct diagnosis. A number of these abscesses run a latent course, Occasionally the symptoms are few and of a passing character. Again the patient is sometimes seen in the last stages of the disease, when the abscess has burst through to the surface of the brain or into the ventricles. Even when the patient has been under observation in hospitals diagnostic mistakers are

possible. When the abscess is accompanied by other intracranial complications a correct diagnosis may be out of the question,

A patient, aged 32 years, had a discharge from the ear lasting several weeks, the mastoid region was red and tender. As no improvement occurred, the mastoid was opened and a breaking-down cholesteatoma was cleared away. Symptoms of intracranial disease persisted, the pain radiating from the ear being marked. There was no fever; considerable mental change was noted, consisting of impairment of memory, excitement varying with depression, loss of appetite, etc. The greater frequency of temporo-sphenoidal than cerebellar abscess, the headache limited to the right temporal and frontal region, and the ultimate appearance of a distinct hemiparesis and anesthesia on the opposite side indicated the position of the abscess. A large cavity in the tempora lobe was laid open and drained, and the patient made a good recovery. The pus contained the streptoccus in pure culture.

These cases should be observed for a long time. If the whole of the disease is not cleared away, a re-appearance of intracranial symptoms is possible.

The Nerve Element in Surgical Pathology.

This was the title of a paper read before the American Medical Association in Philadelphia, June 5th, 1897, by Dr. J. McFadden Gaston, of Atlanta, Ga.

He said it was a fair inference that relief from pain may also indicate a curative influence. Success in surgical operations depends not a little upon the frame of mind of the patient and the nature of the surroundings. The speaker believed shock to be due to the continuous baleful influence induced by the injured tissues, which influence may be arrested by removing the part. The importance of recognizing the neuropathic diathesis cannot be overestimated. There are many evidences of the effects of nerve reflexes which could be alluded to. The writer presented the following conclusions:

1. The cutaneous development of the minute branches of the cerebrospinal system of nerves and the ganglionic ramifications of the great sympathetic are so related to the capillaries as to establish a reciprocal action between them and the great nerve-centers.

2. The vasomotor nerves are so intimately linked to the excitomotor, the excitosecretory, and excitodynamic system of nerves that the impressions made through the superficial afferent nerves are conveyed to all the corporeal structures and tissues so as to produce their effects on the different organs.

3. Reflex phenomena depend upon a complex interchange of local pathologic conditions with the nervous ramifications to remote parts of the body.

4. The fountain head of energy for all functions lies in the nerve-centers, and by controlling emanations from this source of power, the vital forces will be propagated with regularity and uniformity to all the remote parts of the physical organism. On the contrary, a hurtful influence disseminated from the nerve-centers causes disease of different organs.

5. The means to be adopted for avoiding injurious impressions upon the nerve-centers and the measures to be used for the correction of their derangements, make up the whole prophylactic agency of hygiene, and include all the therapeutic appliances in the treatment of the disease as well as the application of surgical measures.

6. Close observation of the various modifications of the nerve element in the physical organism should reveal its direct influence in surgical pathology and lead the surgeon to the adoption of proper means of relief.

Clinical Report of Cases Treated at Bellevue Hospital and Dispensary O. D. P., and in the practice of Dr. S. B. Minden, Assistant Attending Physician.

Case No. 1.—Annie E., aged 28, presented herself for treatment. She complained for a period of two years of constant pain, commencing three days preceding her menstrual flow, usually lasting until the flow was established, and sometimes continuing with varying intensity throughout the menstrual discharge. At present she complains of a sharp, fixed pain over the pelvis and down the loins which I diagnosticated as neuralgic dysmenorrhœa. Treatment: Ammonol tablets, grs. 5, one every three hours, and told patient to report in two days. On her return she informed me that "those flat pills worked like magic. After three were taken I found myself free from pain." She has menstruated twice since without pain, and the stimulating effect of Ammonol on the heart has improved her general condition very materially.

Case No. 2.—John M. K., aged 35, an intelligent man, book-keeper by occupation, complained of a variety of headache; for the most part circumscribed, coming on in paroxysms, and always attended with sickness and affection of sight, and other nervous phenomena. He said, "Doctor, my disease is hereditary. My father and two of my brothers are afflicted with it. I have

been to a great many physicians, and now try Bellevue Dispensary. I have taken almost a hundred kinds of medicines, among them being arsenic, belladonna and strychnine, zinc and iodide and bromide of pot., quinine, antipyrine, phenacetine and antikamnia; but I must say that I have not derived any benefit from them, and am constantly getting worse." We thought this a good subject to try the new analgesic, Ammonol-Salicylate. Tablets, 5 grs. each were prescribed. He was directed to take two tablets every two hours during a paroxysm, and then one three times a day. It is now three months since he had migraine, though at no previous time was he free from sick-headache for more than six or seven days. The drug was retained by his delicate stomach and seemed even to stimulate his digestion. We are now treating his brothers, the eldest Williard, aged 40, having become a morphine fiend. He does not improve so well as the youngest brother, Homer W., aged 26, who has only taken Ammonol two weeks, and is now free from pain.

Sometime ago I was called to attend a gentleman who complained of fatigue and pain in certain of the muscles of the right hand and forearm which come on shortly after the patient has begun to write. This condition increased slowly until the pain became so severe that he was compelled to desist altogether; in fact he had to give up a good position, as his penmanship was getting tremulous and jerky. I found the extensors and flexors of the index finger and the interossii of the second and third fingers and also the thumb to be slightly paralytic, and the deltoid seems to be more or less involved. Treatment: The patient was made to exercise the interossii by separating and approximating the fingers rythmically with a continuous current applied to the nerves and enfeebled muscles. Ammonol, grs. 5, *tid* was prescribed, and after two weeks he began to improve rapidly and is still under treatment.

Another interesting case was one of "La Grippe" and a well marked one at that. The temperature being 104 deg. on my first visit, I tried the antipyretic Ammonol; 5 gr. tablets were ordered, one every 3 hours in $3\frac{1}{2}$ ozs. whiskey. On my second visit temperature was 103 deg., skin dry, eyes bloodshot, tongue glazed, excessive thirst, great discharge per nostrils, told to continue medicine with some liquid beef. Next day the patient's temperature was again 104 deg., which I found was due to the parent's over-feeding him. His temperature and all symptoms subsided by the seventh day under the continuous use of Ammonol.

The Prognosis of Hip Disease Under Efficient Treatment.

Dr. Leroy W. Hubbard (American Orthopedic Association) said that the prognosis, as regards life, was good, although the statistics from public institutions would seem to indicate that the mortality was as high as thirty per cent. The best statistics from private practice were those of Dr. C. Fayette Taylor and Dr. L. A. Sayre, and they showed the mortality to be approximately two per cent. The apparatus must be worn for two years in the average case coming under treatment at an early age, and from three to six years in the neglected cases. According to Dr. Young, the disease was less manageable when developing after puberty, but this was not in accordance with his own experience. The painless form he had found to be the most common, and its course did not seem to be slower or less satisfactory. The shortening should not be over two inches. In making a prognosis, the family history and individual resistance should be given due weight, and it could be stated in a general way that the patient, in a given case would probably recover with little or no deformity, and with some motion in the joint, and that the apparatus would have to be worn at least two years.

The Diagnosis and Management of Syphilitic Brain Diseases.

E. C. Spitzka, before a recent meeting of the N. Y. Academy of Medicine considered the diagnosis between genuine melancholia and a somewhat similar condition observed in the initial period of syphilitic dementia. The true melancholiac was sad because he could not be anything else; the other was depressed becaused he was unable to attend to his business and suspected that his friends realized this. The former suffered from insomnia, while the melancholiac of the initial period of syphilitic dementia slept perfectly through the night, and often also through the day. The true melancholiac was universally neglectful of his dress; the other was very particular about certain parts of his dress and negligent about other portions. The true melancholiac shrank from company; the syphilitic melancholiac was irritable, and his symptoms varied greatly from day to day. The syphilitic finally drifted into a condition in which slight, but characteristic, changes in the medulla oblongata were found. The diagnosis was important, because proper treatment in the early stage

might prove radically remediable. In his experience, the common error had been that of too exclusive reliance on the iodides. His own initial treatment was always with mercury, preferably by inunction. These patients were usually over 45 years of age, and suffered from renal insufficiency.

Treatment of Tuberculosis by the Antitubercle Serum.

Dr. Guy Hinsdale (Congress of American Physicians and Surgeons, May 5, 1897) described the use of the antitubercle serum, in the preparation of which a donkey was first injected with mallein to exclude the presence of glanders, and then received an injection of one cubic centimetre of tuberculin, which dose was doubled every five or six days until two hundred cubic cintimetres were received at a dose. Little reaction followed; the temperature rose only one degree or one and a half degrees, with some slight local œdema. After the maximum dose the animal was allowed to rest three weeks for the elimination of tuberculin. It was then bled and the blood allowed to stand in a refrigerator five or six days, when the serum was collected and one-half per cent. of tricresol added to act as a preservative; it was then kept sealed in a cool place. While Dr. Hindale considered it too early to make any complete report of the clinical tests of the agent, he described one case in which he had employed the serum in the hope that others would try it. The patient was a married woman, aged twenty-seven years, who had a cough in February, 1896, and began to lose flesh and strength. His notes taken in March of that year were: Left lung normal; right lung, increased vocal fremitus, but not marked; bronchial breathing posteriorly; slight impairment of the percussion note posteriorly; some rales at the apex. In April she weighed one hundred and twenty pounds and was losing flesh, coughed, and had night sweats; consolidation of upper lobe; bronchial breathing on both sides, especially the right; increased vocal resonance. In May there was amphoric breathing on the right side; she coughed badly and had fever at night. She was in bed one week and had a hemorrhage. She was then pregnant. She was confined January 1, 1897. The physical signs all pointed to well-established phthisis. The case was chosen as being a test of the efficacy of any treatment. The sputum was examined, with the discovery of a large quantity of tubercle bacilli. An injection of five minims of the serum was made on January 16th, and again at intervals of two or three days until forty minims were injected March 2d. On March 25th her weight was one hundred and twenty-seven pounds. There was some soreness below the left apex in the back. There was no elevation of temperature, and no unpleasant effects of any kind were noted. The injections were made in the left arm near the insertion of the deltoid, after carefully cleansing the part. There had been general improvement in all respects, and bacteriological examinations on March 9th and 15th showed absence of tubercle bacilli. On May 2, 1897, the percussion note was clear all over the chest, front, and back, and the only abnormal sign was a slightly increased vocal resonance over right apex. Dr. Hinsdale stated that the patient was steadily gaining weight and strength, had little expectoration, and that the progress of the case would be reported next year.

The Treatment of Post-Partum Endometritis

A Solowjev having tried several remedies with little result, reports excellent results from the use of tincture of iodine, which he employed in a series of cases of endometritis following delivery at the lying-in hospital of Moscow. (British Medical Journal.) It acts best when used in the early stages and as often as once or even twice daily. As soon, however, as the signs of acute inflammation subside and the secretion diminishes the remedy should be, according to the individual case, applied less frequently. Pains of varying character usually follow this mode of treatment; but, on the whole, they disappear almost within an hour of application. The method of application is as follows: The patient lies on a couch on her back, and a speculum is introduced into the vagina. If the cervix is blocked with mucus, the os is drawn down with a volsella, the portio vaginalis is irrigated, and the parts dried with aseptic cotton-wool; the canal is then swabbed with the pure tincture of iodine. In cases where the corpus uteri is also involved the remedy is applied in the same way as to the cervix.

Alcoholic Paralysis in a Child.

An account of a very interesting and important case was published some months ago in the "New York Medical Journal" by Dr. Herter. The patient was a child, aged 3 years, who had taken twelve ounces of whiskey, and who very soon after lapsed into a condition of stupor which lasted, with some variations, for a couple of months.

Frequent convulsions occurred during this time, usually general, but occasionally restricted to the left side. Paralysis of the right side also daveloped, affecting the arm more than the leg, and contractures took place with muscular atrophy and loss of faradaic excitability in the muscles. There were also strabismus, occasional sickness and irregular temperature, due to the development of a slow lobar pneumonia. After an illness lasting about four months, complete recovery took place. The case is very interesting on accoant of its unusual character and the many cerebral symptoms suggesting meningitis which developed.

Albuminuria in Gonorrhœa.

Columbini (British Medical Journal) has made a study of this subject in three hundred and seventy-two patients suffering from acute gonorrhea, seventy-two being complicated by epididymitis. In none of the cases had any drug been administered, and there was no evidence of cystitis or any disease likely to cause albuminaria. The pus was carefully filtered off, and five different tests for albumin were applied to the filtured urine. Out of the three hundred and seventy-two cases albuminuria lasting from four to thirty days was found in sixty-six, and of these forty-two had epididymitis,twenty-four simple gonorrhea. The author believes that an ascending nephritis could be excluded in his cases as also the influence of any drug, and on the whole he considers that the albuminuria was due to a process ef general blenorrhagic infection, comparable to that which occurs in other infectious fevers.

The Vellow Fever Bacillus.

The Rome correspondent of the Lancett writes that Dr. Giuseppe Sanarelli, who believes that he has discovered the bacillus of yellow fever as well as a remedy for the disease, has embodied his researches in a monograph which has for some time been in the possession of the Accademia Medica di Roma, that body being thus empowered to protect his claim to priority should the claim in the interval be challenged. The supplementary studies by which he has sought to check the laboratory and clinical work leading up to his discovery are now completed, and the whole series—including the substance of the provisional monograph aforesaid—will be published in three successive numbers of "Annali dell' Institute Pasteur." Coincidentally with the appearance of the first of these fasciculi (that is,within a few weeks' time) he will deliver before the Montevidean Society of Medicine a lecture, in which the nature of his discovery and the successive stages by which it was arrived at will be fully set forth.

Operation for Appendicitis in an Infant Aged 4.

F. Villard reports in the London Lancet a case of appendicitis in an infant scarcely 4 years of age. There was a history of habitual constipation. About two days previous the child began to complain of pain in the right side of the abdomen, and this steadily increased, being worst at night, There was a swelling in the right iliac fossa and pain on pressure. Micturition was normal, but there was complete constipation. There had been some vomiting, and the temperature was above the normal. An incision was made above Poupart's ligament. It was noted that the cellular tissue was œdematous, and on cutting through the muscular layers a large abscess cavity with some fæcal contents was opened into. The pus was evacuated and an unsuccessful attempt made to find the appendix. A further attempt revealed it lying behind the cæcum and perforated at its base, It was easily removed and was found to contain a small mass of hardened fæces. Villard is of opinion that one should operate between the second and third day in such cases if the symptoms do not ameliorate. One should not temporise, although the condition may tempt one to do so.

Imperial Granum.

This standard prepared food for Invalids and Children has won the enviable distinction of having successfully stood the crucial test of years of actual clinical experience in private practice, sanitariums and hospitals, while numerous competing preparations have appeared and disappeared—often so completely that even their names are forgotten. The Imperial Granum, however, enjoys so universally the confidence of physicians that its merits are beyond dispute. Moreover, the decision of its manufacturers not to publicly advertise it has secured for it the endorsement of even the most ethical members of the medical profession, who dislike to prescribe any article advertised broadcast to the people and profession alike. Physicians can obtain sample packages free, charges prepaid, on application to the Imperial Granum Co., New Haven, Ct., or John Carle & Sons, New York City.

Non-Ligation of the Umbilical Cord.

Dr. Kellar in a recent number of the Pacific Medical Journal reports a series of 2000 cases of labor in which he has cut the cord about two and a half inches from the umbilicus, stripped it to remove the jelly of Wharton, and left it to desiccate without ligature or dressing. He claims to have had good results in all cases unless the patients were tubercular or syphilitic. Ligation of the umbilical cord in the human infant he claims is unnecessary, because the operation is not required at the birth of any other animal; because a necessity for it does not exist as appears from the formation of the cord and the structure of the component vessels and from the numerous cases in which no ligature was applied and yet no fatal bleeding followed; because to ligate for cleanliness is superfluous; because it is unreasonable to attach to the process of reproduction in women so glaring an imperfection as that the birth of a single child cannot be safely completed without a strand of thread upon the umbilical cord. In many cases he states ligation may be injurious because it may justly be considered as the cause of secondary hemorrhage from the umbilical cord; because by interfering with desiccation of the cord, and thus preventing its separation, it gives rise to ulceration of the naval and not infrequently erysipelas, fungoid excrescence, etc.; because by maintaining the funicular vessels in a state of congestion and distention unnaturally retained blood, it causes inflammation of these vessels and hinders their normal obliteration, laying the foundation for umbilical phlebitis, erysipelas, jaundice, pyemia, etc.; because, by preventing a normal escape of blood when the cord is divided, and thus causing hepatic hyperemia and congestion of the portal circulation, it may lay the foundation of that innumerable list of fatal infantile affections which so often appear to originate in congestion of the portal vessels. In some, and probably not a few, the operation of ligating the funis has been directly fatal because numerous cases of death in which the fatal results were ascribed to ligation have been recorded by the highest obstetrical authorities, because it can be seen how the operation in the case of still-born children maintains the right ventricle in the state of distention, and thus effectually prevents the renewal of the heart's action when it has stopped, or renders the stoppage complete when it is about to cease; because in many instances the removal of the ligature has saved the life of an infant when other remedies had failed.

Flechsig Treatment of Epilepsy.

Flechsig in the Edenburgh Medical Journal reviews the unfavorable results of the Flechsig treatment of epilepsy with a combination of opium and bromides, as reported by several writers recently; he considers that in the fatal cases recorded no causal relation to the treatment has been shown, and points out that a fatal result is common enough in status epilepticus without the opium treatment. A careful watch should be kept by the physician for any untoward symptoms, which would indicate withdrawal of the drug: and Flechsig is more inclined to blame the physician than the drug for the fatal results. His own experience of his treatment by increasing doses of opium has been most satisfactory; six cases out of fifty treated thus have had no recurrence for two and a quarter years, and all the cases treated were severe cases of many years' duration, which had resisted all previous treatment. He begins with simple bromide treatment, and later, if there is no improvement, adds opium in increasing doses, If, however, the opium be used, the patient must be treated as one who is seriously ill: skilled nursing and the most careful medical attendance are essential to the treatment.

Insomnia from Over-Excitement.

Suggestions on the treatment of insomnia are always of value in view of the increasing prevalence of this condition, especially in our cities. The following taken from the "International Medical Annual and Practitioner's Index," 1897, will prove of interest: "A writer in the Gazette hebdomadaire de medecine et de chirurgie, advises in cases in which insomnia is due only to simple over-excitement of the encephalic cells, the following rules and prescriptions; All prolonged literary work at night, remaining in very hot rooms for any length of time, and a too abundant and too exciting diet should be avoided. A capsule containing 15 grains of sulfonal, or one containing 12 grains of trional combined with 4 grains of sodium bicarbonate may be taken in the evening just before eating. Persons who cannot swallow capsules may take the sulfonal pure or in sugar, flavored with vanilla, just before bed time, but it must be immediately followed by a hot infusion of linden flowers or of orange leaves." Should these drugs fail the writer advises the use of bromides, chloral and, in rare instances, of opium and hyoscyamus.

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IS EARNESTLY RECOMMENDED as a most reliable FOOD for INFANTS, CHILDREN and Nursing-Mothers;— for INVALIDS and Convalescents;—for Delicate and Aged persons. It is not a stimulant nor a chemical preparation; but a PURE, unsweetened FOOD carefully prepared from the finest growths of wheat, ON WHICH PHYSICIANS CAN DEPEND in FEVERS and in all gastric and enteric diseases. It is easily digested, nourishing and strengthening, assists nature, never interferes with the action of the medicines prescribed, and IS OFTEN THE ONLY FOOD THE STOMACH CAN RETAIN.

IMPERIAL GRANUM SEEMS TO HOLD FIRST PLACE IN THE ESTIMATION OF MEDICAL OBSERVERS.—"*The Feeding of Infants,*" *in the New York Medical Record.*

IT CONTAINS NO TRACE OF ANY IMPURITY.—*The Lancet, London, England.*

A valuable aid to the physician in the treatment of all the graver forms of gastric and enteric diseases.—*The Prescription.*

As a food for patients recovering from shock attending surgical operations IMPERIAL GRANUM stands pre-eminent.—*The International Journal of Surgery, New York.*

Not only palatable, but very easily assimilated.—*The Trained Nurse, New York.*

IMPERIAL GRANUM is acceptable to the palate and also to the most delicate stomach at all periods of life.—*Annual of the Universal Medical Sciences, Philadelphia, Penna.*

Endorsed by the best medical authorities in this country.—*North American Practitioner, Chicago, Ills.*

It has acquired a high reputation, and is adapted to children as well as adults—in fact, we have used it successfully with children from birth.—*The Post Graduate Journal.*

It has steadily won its way, step by step until it now stands unchallenged at the head of all food preparations.—*The Medical Council, Philadelphia, Pa.*

Especially valuable in fevers, and often the only food the stomach will tolerate in many gastric and enteric diseases.—*Dominion Medical Monthly, Toronto.*

There is no better prepared food.—*The Medical Mirror, St. Louis, Mo.*

It enjoys so widespread an endorsement from the medical profession that its reputation is beyond dispute.—*American Medico-Surgical Bulletin, New York.*

We have used it with the best possible results in several cases of summer diarrhoeas in children.—*The Western Medical Journal, Fort Scott, Kansas.*

It is peculiarly adapted to most of the diseases of infancy and childhood that have originated in the use of improper food.—*The St. Louis Medical Era.*

It is one of those rare preparations that never disappoint—but is all that is claimed for it.—*Maryland Medical Journal, Baltimore, Md.*

IMPERIAL GRANUM has stood the test of many years, while many competing foods have come and gone, and have been missed by few or none. But it will have satisfactory results in nutrition far into the future, because it is based on merit and proven success in the past.—*The Pharmaceutical Record, N. Y.*

★ 'Physician's-samples' sent free, express-paid, to any physician—or as he may direct. ★

JOHN CARLE & SONS, Wholesale Druggists, 153 Water Street, NEW YORK CITY, N. Y.

The Cold-air Treatment of Typhoid Fever.

In an article on this subject in the British Medical Journal, Dr. J. Murray-Gibbes strongly recommends this mode of treatment in typhoid fever, and enumerates the advantages as follows: 1. No handling of the patient is necessary. He lies on a tube mattress and is covered by another, and when it is necessary to lower the temperature a cooling mixture will flow through the tubes. This, the author thinks, should be a continuous current, so that the temperature of the body can be prevented from rising above a certain degree. 2. The shock to nervous patients of being placed in a cold bath is avoided. Attached to the cold water tube will be another tube which can convey hot water, so that warm water can at first flow through the tubular mattress, and then, by means of taps, be gradually lowered to the required degree.

Dr. Gibbes thinks that this method of treatment has great advantages over previous ones, in that it is possible to have any temperature we wish down to 5 deg. F., and its maintenance at any figure between that and the temperature of the external air by the mere turning of a tap. Besides this, by turning another tap, hot water can pass through the same tubes when it is necessary in the treatment of any disease. A patient can be kept for any length of time surrounded by a cold atmosphere, continually abstracting heat, and so preventing a dangerous rise in temperature, and that without disturbing him.

Dr. Gibbes thinks there can be no doubt that the cold-air treatment he proposes will keep down the high temperature of typhoid fever, and so greatly lessen the death-rate.

As the temperature of typhoid fever patients is generaley higher during the night than during the day, the cold-air treatment can be more easily carried out than the cold bath treatment, especially as the nursing staff is diminished in numbers during that time, and assistance can not easily be obtained.

The simple turning of a tap can not be compared with the trouble entailed on the hospital staff in providing a cold bath. In fact, says the author, one nurse could attend to a dozen patients with less trouble than to one patient under the old treatment.

In other complaints, such as sunstroke, and local congestions and inflammations of the chest, etc., the freezing-air treatment must prove invaluable, as tube pads of various shapes could be made to fit different parts of the body for conveying hot or cold water.

Papain---Vegetable Pepsin.

We have received from Messrs. Lehn & Fink a little pamphlet treating of the merits of Papain L. & F., the vegetable pepsin. Judging from frequent paragraphs in medical journals regarding the satisfactory results obtained with Papain in treating indigestion where meat is the principal food, this preparation may now safely be classed among the well tried and reliable therapeutic agents.

We may say that the introduction of Papain is in a large measure due to the efforts of Messrs. Lehn & Fink, who were early in recognizing the valuable qualities of Papain and to bring the product to the notice of the medical profession in this country. The first reports of the efficacy of Papain which appeared in the medical press in the United States were based on experiments made with Papain L. & F.

Since Papain is not a patented preparation, nor any other protection is afforded, it is only fair that Messrs. Lehn & Fink should request physicians to specify their brand, Papain L. & F., when prescribing this vegetable ferment.

A very small amount of alkali is sufficient to keep metal from rusting, so that if steel, iron, nickel or copper instruments are dipped in 5 grammes alcohol containing one or two grammes of either borate, carbonate, bicarbonate or benzoate of soda, they will not tarnish.

Baroness Hirsch has given $400,000 to build a hospital for consumptive children on the Rivera.

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and won't rip—the stays prevent it

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For Varicose Veins
Weak and Swollen Joints
Dropsy of the Limbs
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are provided with the Patent Non-Elastic Stays and Adjusting Loops, making them doubly durable and easy to draw on. All styles and sizes in Thread or Silk Elastic. Send for catalogue.

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is a hypnotic of tried and approved value. It possesses undoubted advantages over other hypnotics in Prompt Effect, Reliable Action, Freedom from Evil After-effects and General Superior Therapeutic Value, as confirmed by contributions to current literature by H. C. Wood, W. Hale White, John V. Shoemaker, Chas. L. Dana, Chas. H. Steele, John Aulde, S. V. Clevenger, and many other authorities.

Much depends on the proper administration of Chloralamid to obtain the full effect.

Elixir Chloralamid

presents the hypnotic in most suitable form. Supplied in 8 oz. original bottles. Dose: One tablespoonful (15 grains Chloralamid).

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Regarding Fatal Pulmonary Embolism in Gynecological Disease.

Gressner believes the production of thombosis and the resultant pulmonary embolism is always brought about through the concomitant action of several causes. The origin of the thrombosis is inflammatory disease acting either directly within the blood-channel, or the inflammatory process arises in the tissue surrounding the blood-vessel, and then it extends to the blood vessel wall. Furiher important factors which favor thrombosis are the presence of anemia and changes in the heart. These last conditions are most often found with fibroid tumors, which accounts for the greater number of instances of thombosis and pulmonary embolism associated with this disease. Besides fibroid tumors the malignant new growths may predispose the patient to thrombosis. The writer considers mechanical cause to be of very little moment. The characteristic increase of the pulse frequency which Mahler has described in these cases Gessner has not observed in all cases, The careful observation of the pulse after operation is always of the greatest importance. He agrees with Mahler and Wyder that in fatal pulmonary embolism the thrombosis usually occurs in the large pelvic veins. The separation of emboli is without doubt mechanical. The treatment should be chiefly prophylactic. If in spite of this pulmonary embolism does occur the patient is best treated with hypodermic injections of ether and elevation of the upper part of the body. For the subjective symptoms morphine hypodermically has a favorable influence.

A Good Thing.

Investigations made during the past year by our bacteriologist prove that our ideas regarding many things are erroneous, thus the antiseptic agents used in ointment vehicles of a pure fatty nature are of very little use, and in a number of cases, if not dispensed in the most careful manner, are injurious. As an example: Oxide of Zinc Ointment is without antiseptic properties. While a fresh ointment is a useful remedial agent, especially in local treatment, a rancid one can do much damage. There is a growing demand for a thoroughly antiseptic ointment, and the medical profession now recognize asepticism in an ointment to be as important as in the case of a solution. Recognizing this The Norwich Pharmacal Co., in presenting their Unguentine to the profession use a pure Petrolatum base, to which is added Lord Lister's sheet anchor Carbolic Acid. This, with Ichthyol, is their modification of the Sir Astley Cooper formula, and when Unguentine is applied to a wound or other lesion it forms at once a thin film which totally excludes the atmosphere and prevents bacterial invasion, making it the best surgical dressing in the world.

Physiology and Pathology of the Thyroid Gland.

Horseley (British Medical Journal), in a most careful article, so characteristic of that investigator, states that more than 100 years ago King, of Guy's Hospital, showed, by direct experiment, that the colloid material of the thyroid gland passed into the lymphatics, but this fact was lost sight of until Schiff, in 1859, showed that the organ was important to life. In 1884 the same writer placed the question upon an accurate basis. Since that time numerous experimenters have worked at the subject, Murray and Ord being the first to show that the fatal symptoms known as myxedema can be dissipated by the administration of the thyroid gland. Since 1891 the microscopic construction of the gland has undergone marked extension, especially that of the parathyroid,

He summarizes his paper thus: It is now generally agreed (and the more so since the recent extensive researches of Mr. Edmunds) that, whereas myxedema and cretinism result from the simple loss of the function of the thyroid gland, exophthalmic goitre in its various degrees results from a perversion of that function.

The Schott Treatment of Cardiac Disease.

Dr. W. B. Camac, in (American Medical Association, June 5, 1897). No satisfactory theory has ever been advanced to explain fully how this treatment meets the indications and produces the results which are claimed for it. Schott himself explained it on the theory of the reflex action of the nerve-centers. Lauder Brunton and Ludwig have discovered that the muscular system has a capacity of storing blood equivalent to that of the internal organs and the skin, and explained the actions of the Schott treatment on the theory that the resistant treatment and the baths combined stimulate the muscular system to such a degree as to relieve resistance in the peripheral circulation, but, whatever the theory of its action, the results obtained by the treatment at Neuheim are undoubted in reducing the size of enlarged and dilated hearts. This method of treatment has been introduced into the Johns Hopkins Hospital for the purpose of testing its efficacy not only in cases of heart disease but in affections of the kidneys. The report embraced the results of ten cases: of these four patients had died two were not improved, one showed improvement only, while under constant treatment, and in three the permanent results were most satisfactory. Some of these were cases of chronic nephritis in various stages of advancement, but all of the patients had enlarged or dilated hearts. In connection with the Schott treatment, however, various heart stimulants, such as nitroglycerin, digitalis, stophanthus, and strychnine were used as indications demanded. The conclusions of the experiments were that, while extensive changes in the position of the cardiac beat were obtained in all, that effect alone does not imply permanent improvement. In Bright's disease it cannot be depended upon for any satisfactory results.

Appendicitis Complicating Pregnancy.

It is not long since Mundé first recorded a case of appendicitis complicating pregnancy; and now R. Abrahams is able to review fifteen examples of the occurrence, including four under his own observation. He points out the extra danger met with in such cases when the uterus forms one of the walls of the abscess cavity, and regards the habitual constipatian of pregnancy as a predisposing etiological factor. The conditions which require to be differentiated from appendicitis in pregnancy are chiefly right-sided tubal gestation, salpingitis or oöphoritis, and typhoid fever. In 10 supperative cases, all but one of which were operated upon, there was a maternal mortality of 7 (70 per cent.); on the other hand, all the instances of catarrhal appendicitis recovered, so that the total mortality was a little over 46 per cent. The infantile mortality was over 85 per cent. The treatment is early operation (laparotomy) in acute perforative appendicitis, a pulse of 116 to 120 being an indication. The same rule holds for recurrent old appendicitis in pregnancy, even if the attack be mild.

The Action of Alcohol on the Motor Nerves.

Gioffredi (Rif. Med., March 19th, 1897,) describes certain experiments with ethylic and amylic alcohol to determine the action of alcohol on the motor nerves and on the latent excitability of muscles. By means of graphic tracings he found that alcohol has a paralytic action on motor nerves, preceded by a fugitive and inconstant stage of excitement. At first it increased the velocity of the stimulus to the motor nerves, but this was afterwards diminished. In the first stage the latent period is shortened, but later it becomes lengthened. The paper is illustrated by several tracings taking during the course of the experiments. The sciatic nerve and gastrocnemius muscle of the frog provided the working material.

Practical Evidence.

I used your sample of Resinol on myself for Pruritus Ani, which has been my curse for several years, defying all applications. The first application proved efficacious, and I am now using and prescribing Resinol for the above and several other itching troubles. In fact, I think it is the best remedy I have ever used for the diseases for which it is recommended.

H. B. LEIGHTON, M.D., Boston, Mass.

I have used your Resiuol in Inflammatory Rheumatism with happy results. Hope others will try it. I know they will be pleased.

E. J. BURNSIDE, M. D., Phila., Pa.

It gives me pleasure to say that Resinol is the best application for local treatment of Eczema I have ever used. I can also bear testimony to its efficacy in Erysipelas, and its soothing and healing virtues in all inflamed surfaces.

A. S. FRENCH, M.D., Lawrence, Mass.

It is but just that I should attest my satisfaction with the use of Resinol. It is a marvel of efficacy in Pruritus Ani. In relief of soreness, due to scalding from acute Nasal Coryza, it acts like a charm.

J. H. THOMPSON, M.D., Goshen, N.Y.

Resinol is by far the best application I have ever used in a practice of 48 years for the diseases recommended. A case of Eczema commencing on the scalp and extending over the entire face and which had been under the treatment of various physicians with no apparent benefit, was completely cured by it in less than two weeks.

J. J. WORTHY, M.D., Lavalle, Wis.

I am very much pleased with the effects resulting from the use of Ung't Resinol in cases of Itching Piles, Pruritus Ani, and Vulvae, Eczema, Erysipelas, &c. In fact it is the remedy "par excellence" in all cases where there is a Congested or Hyperaemic condition of the capillary Blood Vessels. C. D. SMITH, M.D., Atlanta, Ga.

I frequently prescribe Resinol, and am well pleased with its work. It has proved very useful in many forms of eruption of the skin, and especially so in Pruritus Vulvæ or Ani, and in Eczema of other parts of the body.

LUCY HALL BROWN, M.D., Brooklyn, N. Y.

I take pleasure in stating that I have found Unguentum Resinol almost a specific for Pruritus Ani, Itching Piles and Marginal Eczema.

HENRY HUG, M.D., Detroit, Mich.

Resinol is a harmless antiseptic and a true skin anæsthetic, absolutely non-irritant and non toxic (free from lead, mercury, or cocaine), can be applied to mucous, excoriated or denuded surfaces of any extent at any age without fear of untoward results, and is not contra-indicated by any internal medication that may be deemed advisable.

Resinol is put up in *one ounce* jars at 50 cts. each, and can be obtained at any drug store.
Sample sent **free** on application, or **one** regular size jar for trial on receipt of 25 cents.

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(Mist. Quinqui Iodid.)

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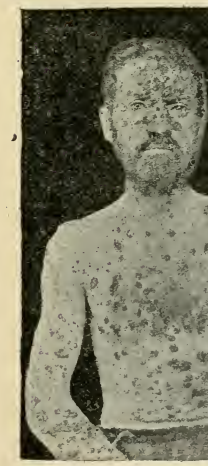
EACH FLUID DRACHM CONTAINS:

Arsenici Iodidum, ...1-24 grains.
Ferri Iodidum.....1-5 grains
Hydrargri Iodidum, ...1-24 grains.
Potassii Iodidum,.....2½ grains.
Manganesii Iodidum,.....1-5 grains.



In Secondary and Tertiary Syphilis this preparation is considered by all the leading authorities on the subject to be the best. It should be given in teaspoonful doses, three or four times a day, and continued for several months.

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CHARLOTTE, N. C.

Latent Tuberculosis in the Infant and its Treatment.

Delmis says that there is no doubt that latent tuberculosis in childhood is of very frequent occurrence, and that we find tuberculous foci at autopsies which are not the causes of death. He believes that 50 per cent. of infants carry the germ of tuberculosis, ready to develop as soon as a favorable opportunity occurs. The author shows that all the acute incurable cases are simply the last stage of a previously localized latent tubercular process, which could have been successfully treated if a timely diagnosis had been made. He calls attention particularly to three points: The general condition of the child (pallor, emaciation, relaxed muscular system, transparent skin, long eyelashes, bright eyes, rapid growth, mental lassitude), the micropoly-adenopathy, and the hypertrophy of the tonsils or adenoid vegetations in the naso-pharyngeal space. These are nearly always signs of a latent tuberculosis, particularly so if they occur together. Treatment is not a quession of destroying the bacilli, but of strengthening the organism to resist their invasion, to favorably influence the soil upon which they might develop their destructive activity, to fortify the condition of the bloud globules and their amount of hemoglobin, and in this manner to strengthen the blood against the bacilli and their toxines.

The Duration of Infection in Whooping-Cough.

Weill, who in 1893 expressed the opinion that whooping-cough is contagious only during the premonitory catarrhal stage, has since put his opinion to the test. On various occasions he permitted nearly 100 young children, who had not previously suffered from whooping-cough, to be associated in the same ward for twenty days or more with children suffering from the disease during the stage of whooping. In only one case was the disease contracted, and in this instance the patient whom the infection was derived was in the very earliest period of the whooping stage. In three small epidemics Weill was able to satisfy himself that infection was contracted from children who had not yet begun to whoop. He concludes that infectious diseases vary soon after the characteristic whoops commence, and that therefore in a family it is not the patient who is already whooping, but his brother and sisters who have not previously had whooping-cough who ought to be isolated.

The Moderate Use of Alcohol is a Delusion.

The belief that, because no poisonous effects are apparent its use is harmless, is a fatal error. Many moderate users of spirits are physiologically inebriates and suffer from defects and degenerations of the brain and nervous system that are referred to other causes. They are more prominently diseased than others who become intoxicated often from excess of spirits. There is absolutely no moderate use of spitits that is not injurious, and no means of testing the degree and extent of the damage which follows from spirits in any given quantity.

The alcoholic who boasts of superior strength, because he was never intoxicated, calls attention to the physiological fact that he possesses an abnormal brain. The absence of symptoms of poisoning (intoxication), in one who uses spirits continuously, indicates serious faults of structure, and a coarser, more degenerate type of brain. The injury from alcohol is more general and marked, and the higher psychical centers are more profoundly paralyzed. The consciousness of his real condition is covered up. The sensory centers are perverted, false impressions and false reasoning increase steadily and the power of correction diminishes. The condition is one of psychical palsy, from which restoration is difficult. All such persons are defects and degenerates, both inherited and acquired,—*Quarterly Journal of Inebriety.*

Retroversion of the Uterus.

Martin has arrived at the following conclusions touching upon this subject: (1) Continuous retroversion of the uterus is a condition that frequently leads to serious pathologic consequences. (2) Retroversion without adhesions can be cured without operative interference in about twenty per cent. of the cases in which it occurs. (3) A small percentage of cases of retroversion with adhesions can be cured by massage, electricity, and depletion. (4) Retroversion with unyielding adhesions should be corrected through Douglas' culde-sac and the round ligaments should be shortened at the same operation. (5) Retroversion with diseased appendages should be treated through an abdominal incision and the uterus brought forward and suspended from the urachus or from a ligament constituted of peritoneum. (6) When the Alexander operation is performed, the ligaments should be secured without resort to a permanent buried suture, and this can be best accomplished by tying the two ligaments together in a firm knot over the pubes beneath the integument.

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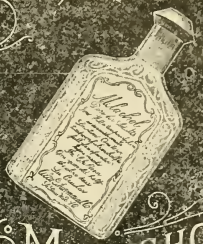

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Rapid Diagnosis (Bacteriological) of Diphtheria.

Dr. Henry Koplik (American Pedeatric Society) presented an apparatus for this purpose. It consists of an ordinary water oven, which may be kept hot by a lamp on a tripod. The outfit would not cost more than two dollars. The temperature should be maintained at 38 deg. C. The smears from the throat are to be applied to Loeffler's peptonized blood serum. It is to be treated for two and one-half or three hours, when the growth may be removed by a platinum needle and stained on a cover glass by Loeffler's blue. Loeffler bacilli will grow in a temperature of from 20 deg. to 39.5 deg. C., but the low point requires a long time. An excess of heat, on the other hand, is bad, as it favors the streptococci, which may outgrow and cover the Klebs-Loeffler bacilli. The method is simple, An expert laboratory bacteriologist is not required.

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The Intrauterine Use of Elastic Bags in the Induction of Labor.

Stieda, according to the British Medical Journal employs two methods in the induction of labor or abortion by elastic bags. One in which the bag is placed within the cervix, and another in which it is carried above the internal os into the lower uterine segment. With this treatment Stieda combines frequent hot douching to soften the parts and promote dilitation. Five cases are described in detail in which labor was induced in this manner. A living child was born in all the cases, the length of the induced labor varying from nine to twenty-four hours, fifteen hours being the average time. In several cases the induced labor was much shorter than the previous ones. In some cases it was necessary to use spicula in introducing the bag, but in the most this was not found essential, Where it was desired to hurry labor traction was made upon the supply-tube through which the bag was filled, and the distended bag was slowly drawn through the cervix. Where haste was not desired the bag was allowed to remain until expelled. All air was forced from the bag before its introduction, and it was filled with sterile water. Stieda records three cases in which he induced abortion by the same methods. In these he was also successful. The abortion was concluded in about seven hours, the bag being used for between one and two hours. In those cases in which traction was made upon the

bag the pelvis of the patient was raised so that the traction was exercised downward and backward in the pelvic axis.

Etiology of Asthma.

Kuss maintains that, among the various causes of true asthmatic dyspnœa, the principal is a defective evaporation caused by a want of sufficient fluid in the epithelial cells of the pulmonary vesicles. This insufficiency of fluid must be attributed to the reflex affection, from various causes, of the vasomotor nerves governing the nutrition of the cells, and produces the same effect as a sudden and considerable reduction in area of the active pulmonary surface. The convulsive action of the respiratory muscles might easily be a consequence of this dyspnœic condition. In the treatment of asthma (1) increased activity must be given to the secretary powers of the epithelial cells by acting on the secretory (vasomotor) nerves; (2) the determining cause of the harmful reflexes must be obviated by various recognised methods; (3) the physiological and anatomical soundness of the alveolar walls should be maintained by appropriate nutrition.

The Treatment of Typhoid Fever.

The treatment of typhoid fever depends so entirely upon the individual case, that no set rules can be laid down. Each case must be treated according to the special symptoms presented. As a rule, I do not think that doctors pay as much attention to the personality as they should, nor do I think they realize it's importance in applying remedies.

The initial dose of calomel, is of great value, is one of the few things that can be followed as a routine treatment. It cleans out the canal, and removes the cause of much future trouble. With the Brand treatment, I have no personal experience. It does not seem to be applicable to general practice, especially among the poor. With children, the sponge bath seems to be of real value, and you can put them in a tub of water, if the temperature is excessive. But it is dangerous to trust this to an ignorant person, or one who is careless. Drugs to reduce temperature, are of uncertain utility, and given indiscriminately, are positively harmful. One grain of Antikamnia caused a rigor in a child of 14 years, administered when temperature was 105. They—I refer to the coal-tar preparations—seem to be of service in certain cases. A capsule of the bromide of quinine, acetanilid, and salol, (two grains each) has been of service. A mixture of Aq. Camph., Spts. Aeth. Nit., and Liq. Acet., given every three hours, is useful. Treat complications as they arise.

Intestinal antiseptics are of doubtful effect. Not more than one case in three or four is apparently benefitted. Beta-naphthol and carbolic acid, are sometimes very effective, in the first and second weeks, if the stomach will bear them. In the third and fourth weeks, turpentine is of unquestioned utility.

As to diet, nothing is better than buttermilk. This should be made by a careful person, to insure cleanliness. Alcohol, in the form of milk-punches, or mixed with ice-water is good. Liquid peptonoids, beef juice, etc., may be used with advantage, when the stomach tires of one thing.

J. C. Means, Natchez.

Sarcoma of the Skin in the Newborn.

Dr. A. Jacobi read a paper with this title before the recent meeting of the American Pediatric Society. He said, in part, that primary sarcoma of the skin is rare in adults, though it occurs between thirty and fifty years of age. Genuine sarcoma is a connective-tissue growth that increases rapidly. There is no recovery from it. Congenital cases are mentioned in literature, but the description usually shows the affection to have been subcutaneous rather than in the skin. Dr. Jacobi then analyzed the recorded cases, and found but one a true case. In 1884 he was the first to distinguish these growths from cancer, and has since so taught. The second case he now added to the list, with the following history:

Age, four months. A normal labor and normal breast-fed baby. When he was one month old a pink spot appeared on the scrotum. When three months old the spot was nodulated and bright red in color. It measured one and one-half by two centimetres. It was cut out easily and healed kindly. A small spot on the penis was cauterized and healed. Lupus was excluded, because there were no swollen glands. The microscope showed the tumor to be composed of fusiform and giant sarcoma cells. It is probable that the aberation of growth occurred at the fourth month of embryonic life.

He whose life has failed to make the world better than he found it, must find it very hard to die.